Environmental Assessment/Regulatory Impact Review/Regulatory Flexibility Analysis

For

Implementation of an Observer Program for At-sea Processing Vessels in the Pacific Coast Groundfish Fishery

Prepared by
National Oceanic and Atmospheric Administration
NOAA Marine Fisheries Service
Northwest Region
7600 Sand Point Way, NE,
Seattle, WA 98112
Tel: (206) 526-6140
Fax: (206) 526-6736

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1.0 INTRODUCTION

The groundfish fishery in the Exclusive Economic Zone (3 to 200 miles off shore) off the Washington-Oregon-California (WOC) coast is managed under the Pacific Coast Groundfish Fishery Management Plan (FMP). The Pacific Coast Groundfish FMP was prepared by the Pacific Fisheries Management Council (Council) under the authority of the Magnuson Fishery Conservation and Management Act (subsequently amended and renamed the Magnuson-Stevens Fishery Conservation and Management Act). The Pacific Coast Groundfish FMP was approved by the Assistant Administrator for Fisheries, National Oceanic and Atmospheric Administration, on January 4, 1982 and became effective on September 30, 1982.

Actions taken to amend FMPs or to implement regulations to govern the groundfish fishery must meet the requirements of applicable federal laws, regulations, and executive orders. In addition to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), these federal laws, regulations, and executive orders include the: National Environmental Policy Act (NEPA), Regulatory Flexibility Act (RFA), Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA), Coastal Zone Management Act (CZMA), Paperwork Reduction Act (PRA), Executive Orders (E.O.) 12866 and 13175, 12898, and 13186, and the Migratory Bird Treaty Act.

NEPA, E.O. 12866 and the RFA require a description of the purpose and need for the proposed action as well as a description of alternative actions that may address the identified problem. A description of the proposed action, the purpose and need and general background materials are included in Section 1 of this document. Section 2 describes a reasonable range of alternative management actions that may be takento address the proposed management need. In accordance with NEPA requirements, Section 3 contains a description of the physical, biological and socio-economic characteristics of the affected environment. While section 4 examines the physical, biological and socio-economic impacts of the management alternatives as required by NEPA, E.O. 12866 and the RFA. Section 5 addresses the consistency of the proposed actions with the FMP, Magnuson-Stevens Act, ESA,MPA, CZMA, PRA, E.O. 12866, E.O. 13175, E.O. 12898, and E.O. 13186, and the Migratory Bird Treaty Act. The Regulatory Impact review required by E.O. 12866 to address the economic significants of the action, and the Regulatory Flexibility Analysis is required by the RFA to addresses the impacts of the proposed actions on small businesses are found in Section 6. Section 7 identified the reference materials used to prepare the document and section 8 lists those who prepared and contributed to the preparation of the document. The NEPA conclusions or the Finding of No Significant Impact will be prepared as a memorandum that accompanies this document.

1.1 Proposed Action

NMFS proposes to amend the regulations implementing the Pacific Coast Groundfish Fishery Management Plan (FMP) to provide for a mandatory, vessel-financed observer program on at-sea processing vessels. This action would require processing vessels to employ and pay for either one or two (depending on vessel length) NMFS-certified observers obtained from a third-party NMFS-permitted observer provider company while participating in the Pacific Coast groundfish fishery. The action also specifies certification and decertification requirements for observers, and defines the responsibilities of observers and processing vessels.

Under this proposed rule, at-sea processing vessels will be required to obtain their observers from third-party observer provider companies that are subject to the Alaskan regulations at 50 CFR 679.50. These are comprehensive regulations that provide for permitting and permit sanctions against the observer provider companies. There is no need to duplicate these provisions in the WOC regulations, as the observer provider companies will be regulated under the Alaska regulations by the NMFS Alaska Region. Therefore, the proposed action refers to the Alaskan requirements for observer providers, but does not

repeat them in the WOC regulations.

1.2 Background

The WOC at-sea whiting fishery is a mid-water trawl fishery that is composed of large (>250 ft in length) catcher-processor and mothership vessels. The catcher-processors both harvest and process catch while the motherships depend on smaller catcher vessels to deliver unsorted catch for processing. The processing vessels primarily operate in the Alaskan pollock (*Theragra chalcogramma*) fisheries, but move south to the WOC to fish for whiting between pollock seasons.

Since 1991, the domestic at-sea whiting processors have voluntarily carried National Marine Fisheries Service (NMFS) observers to sample the catch and provide data that is used to: estimate total landed catch and discards; monitor the attainment of annual groundfish allocations; estimate catch rates of prohibited species; and assess stock conditions. The at-sea processing vessels have voluntarily carried observers since 1991 and all have carried two observers since 2001. Carrying 2 observers increases the accuracy of data used to monitor fishery allocations and estimate incidental catch.

In the years of foreign and joint venture fishing of whiting, following implementation of the Magnuson Fishery Conservation and Management Act in 1978, each foreign vessel operating in the WOC whiting fishery was required to carry a NMFS observer. By 1989, the foreign fishery was displaced by joint venture operations in which U.S. catcher vessels delivered to foreign processors. By 1991, joint ventures were displaced by domestic operations in which U.S. vessels harvested the fish and either processed them or delivered them to other U.S. processors, on shore or at sea. However, when the fishery became fully "Americanized," there were no regulations in place to authorize placement of observers on the domestic at-sea processors.

Concern about the lack of data that would be available if observer coverage no longer applied to at-sea processing vessels, resulted in the Council recommending, and NMFS preparing, a proposed rule that required placement of one NMFS-certified observer on board each at-sea processing vessel over 125-feet in length (57 FR 54552, November 19, 1992). This proposed rule also contained permit requirements for mothership vessels, defined trip frequency limits for bycatch, established logbook and reporting requirements, and contained a number of other provisions that were deemed necessary to continue the data flow and management of the fishery. After a several years, the provisions in the proposed rule were no longer applicable and it became apparent that the proposed rule would need to be re-written and proposed again. Only the observer provisions are being considered at this time, data flow and management provisions will be considered in a different rulemaking and at a separate point in time. No significant comments were received on the November 1992 proposed rule publication.

Maintaining voluntary observer coverage in the domestic at-sea whiting fishery has been the result of shared efforts between the NMFS Northwest Region, the Northwest Fishery Science Center (NWFSC), the North Pacific Groundfish Observer Program (NPGOP) which is a division of the NMFS Alaska Fisheries Science Center, independent observer providers, and the fishing industry. The Northwest Region monitors the fishery and interacts with industry; the NWFSC and NPGOP provide for pre-hire screening, field training, debriefing interviews, at-sea support, sampling equipment, and data management services; observer providers certified for the federal groundfish fishery off Alaska provide hiring and support services; and individual processing vessels pay the direct costs associated with carrying the observers.

In 1992, the Council recommended, and NMFS prepared, a proposed rule for a comprehensive data collection program for at-sea processing vessels. This proposed rule included an observer plan that defined the roll and responsibilities of observers, observer providers, and vessels, it also required the placement of one observer on board each at-sea processing vessel over 125-feet in length (57 FR 54552, November 19, 1992). In addition, the 1992 proposed rule contained permit requirements for processing vessels, defined trip frequency limits for bycatch, established logbook and reporting requirements, and

contained a number of other provisions deemed necessary to continue the data flow for management of the whiting fishery. Pending publication of the final rule, the at-sea processing fleet, which has been supportive of the need for data to monitor the fishery, has voluntarily carried and paid for NMFS-trained observers on board each at-sea processing vessel, and have voluntarily submitted production reports and logbooks to NMFS so that the fishery could be closely monitored and allocations accurately achieved. To date, the proposed regulatory requirements pertaining to mandatory observer coverage levels, and the role and responsibilities of observers, observer provider companies, and vessels participating in the at-sea whiting fishery have not been codified.

Amendment 13 to the Pacific Coast Groundfish FMP, which was approved by NMFS on December 21, 2000, was intended to bring the FMP in compliance with the standardized reporting methodology requirements of the 1996 Sustainable Fisheries Act amendment to the Magnuson-Stevens Act. Under these requirements, an FMP must adopt a standardized reporting methodology for assessing the amount and kind of bycatch occurring in the fishery. Amendment 13 attempted to comply with these requirements by expanding the FMP language concerning observers so NMFS could establish observer coverage requirements to gather new data on bycatch. On April 12, 2002, a federal magistrate concluded in Pacific Marine Conservation Council, Inc. v. Evan No. C 01-2506 JL (N.D. Calif.) that the Pacific Coast Groundfish FMP fails to establish an adequate bycatch methodology because it failed to establish either a mandatory or adequate observer program. This proposed rule is in part intended to addresses the court's concern by establishing mandatory observer requirements for the at sea processing sector of the groundfish fishery.

Observers

Observers are a uniformly trained group of technicians who's objectives are data gathering. They are stationed aboard vessels to gather independent data about the fish that are taken or received by the vessel. The primary duties of an observer include: estimating catch weights; determining catch composition; collecting length and weight measurements, and sex determination. Standardized sampling procedures, that are intended to provide statistically reliable data for fleetwide monitoring of the fishery, are defined by NMFS. Data collected by observers are compiled for the purpose of estimating overall catches of groundfish; estimating incidental catch of species not allowed to be retained by these vessels; and for assessing stock condition.

To be an observer, an applicant must have a bachelor's degree in fisheries, wildlife biology, or a related field of biology or natural resource management. Observers must be capable of performing strenuous physical labor, and working independently under difficult conditions without direct supervision. Due to the difficulty in identifying many of the WOC species, only individuals who have been previously deployed on at least one cruise as an Alaskan groundfish observer have been deployed as observers in the whiting fishery. Prior to deployment in the whiting fishery, observers are required to participate in a training/briefing session where they are asked to voluntarily adhere to NMFS policies regarding conduct, conflict of interest, and data confidentiality. To qualify as a whiting observer an individual must attend a training/briefing course conducted by NMFS and pass all proficiency tests. Upon completion, whiting observers are provided with a letter indicating that they successfully completed the required training/briefing course.

Under the voluntary whiting observer program there are no regulatory requirements defining observer hiring procedures, minimum qualifications, certification requirements, responsibilities, prohibited behaviors, or actions that NMFS may take to remove or censure individuals who are found to have violated program policies or unsatisfactorily performed the duties of an observer. Because the duties of an observer are specialized, requiring certification helps to ensure that observers understand their responsibilities and duties. In addition, there are currently no provisions that allow NMFS to deal with observers who do not adequately perform their required duties or engage in prohibited behaviors. A suspension and decertification process (Alternatives 2 or 3), would allow NMFS to deal with observer performance or

behavioral issues while allowing observers an opportunity to submit documentary evidence or petitions prior to a final determination.

Observer Providers

Companies that met the certification requirements for the Alaskan groundfish observer program have been providing support services for observers in the whiting fishery since 1991. Observer support services typically include: recruiting, evaluating, and hiring qualified candidates; providing for specific levels of compensation and insurance coverage; providing observers' salary, benefits and personnel services in a timely manner; providing all logistical support necessary for placing and maintaining observers aboard the vessels (travel arrangements, lodging, per diem, and other relevant services); maintaining communications with deployed observers; ensuring that all in-season catch messages and other required transmissions between observers and NMFS are delivered within a specified time frame; providing an employee who is on call 24 hours a day to handle emergencies involving observers or problems concerning observer logistical support; ensuring that observers meet the debriefing obligations are met; and ensuring that all sampling and safety gear are returned to NMFS.

An individual or business seeking to become an observer provider for the Alaska groundfish fisheries, must submit an application to the Alaska Regional Administrator describing their ability to carry out the responsibilities and duties of an observer provider. The Alaska Regional Administrator may certify one or more observer providers based on the information submitted by the applicant and on other selection criteria that are available from the National Observer Program Office (NOPAT). While providing services in the Alaska groundfish fishery, observer providers can be placed on probation, decertified, or suspended by NMFS to address performance or behavioral issues. The suspension and decertification process, allows observer providers the opportunity to submit documentary evidence or petitions prior to a final determination.

There is a day-to-day competition for business between observer providers and little control over their behavior or performance. Currently there are no regulatory or contractual requirements specifying the duties and responsibilities of companies who provide support services for whiting observers, nor are there any requirements pertaining to observer provider certification or performance standards for the WOC (Alternative 1, Status Quo). To date, contracting companies for the WOC whiting fishery have voluntarily followed the hiring, evaluating, and recruiting regulations that apply to the federal groundfish fishery off Alaska, including hiring individuals who meet the minimum qualifications and submitting information used for scheduling training, briefing, debriefings, and maintaining the observer deployment database. Without regulations or contractual agreements defining observer provider certification requirements, responsibilities, deployment conditions, standards of conduct, conflict of interest standards and procedures for disciplinary action, NMFS is limited in its ability to oversee the actions of contracting companies, and to assure that the necessary information for routine program operation will continue to be provided in the future (Alternative 1, Status Quo).

Industry

In 2001, twelve processing vessels, seven catcher-processors and five motherships participated in the WOC at-sea whiting fishery. All but one of these vessels participated in the federal groundfish fishery off Alaska, where they were require to carry observers during this same period. While carrying observers in the groundfish fishery off Alaska each vessel must: provide observers access to navigational equipment, bridge and work decks, catch records, and unsorted catch; furnish specific communications software and computer hardware, provide ample notification of the delivery/retrieval of catch and disembarkation schedule; maintain general vessel safety and a safe sample location for the observer; and provide adequate accommodations and food at no cost to the observer or federal government. In addition, vessels carrying observers in the groundfish fishery off Alaska are prohibited from verbally, physically, or sexually harassing the observer; interfering with sampling or related activities; or stealing sampling equipment or the observer's

personal items. In addition, all twelve whiting vessels are qualified for the Bering Sea restricted access groundfish fisheries off Alaska, were they are required to have NMFS-certified observer sample stations.

Operational or mechanical barriers can easily prevent an observer from sampling according to the protocols defined by NMFS. To maintain data integrity, vessels must provide observers with basic amenities. The observer's ability to accomplish their duties requires that the vessel provide: 1) notification of fish being brought aboard, 2) access to unsorted catch, 3) sufficient time to collect a sample, and 4) adequate space in which to collect and work up samples. When there are no regulatory requirements defining the conditions necessary for an observer to carry out their duties, individual operations may inadvertently neglect to provide the necessary provisions (Alternative 1, Status Quo).

Coverage

Mandatory observer coverage requirements for the at-sea whiting fishery have not been codified (Alternative 1, Status Quo). Since 1991, all processing vessels participating in the at-sea whiting fishery have voluntarily carried at least one observer. Since mid-1997, when the Department of Justice approved allocation of quota shares for catcher-processors who are members of the Whiting Conservation Cooperative, all catcher-processors have generally carried two observers. Having two observers allows all or almost all hauls to be sampled. This level of sampling provides the Whiting Conservation Cooperative members with additional data for better managing their voluntary individual quota program. In contrast, the mothership sector did not begin carrying two observers until 2000. The motherships chose to increase their observer coverage to obtain additional data for better estimating incidental catch of prohibited and overfished species. The tribal mothership, which processes catch taken by catcher vessels harvesting the Makah tribal whiting allocation, has typically carried two observers since 1996.

1.3 Purpose and Need for Action

The current regulations requiring observers in the Pacific Coast groundfish fishery (50 CFR 660.360) apply to catcher vessels, but not to processing vessels. So far, the only processing vessels participating in the fishery are large catcher/processors and motherships that also participate in the Alaskan pollock fisheries. Between pollock seasons, these vessels travel to the WOC area, where they process Pacific whiting.

For the most part, the at-sea whiting fishery has been monitored satisfactorily under the voluntary program. However, there is concern about the lack of data that would be available if at-sea processing vessels no longer voluntarily carried observers. With this in mind, at its April 1999 meeting the Council recommended that NMFS proceed with a regulatory package to provide for a mandatory observer program in the at-sea processing portion of the whiting fishery for vessels more than 125 ft (38.1 m) in length. The Council's recommendation would have covered all the processing vessels that were participating in the whiting fishery at that time. In addition, on April 12, 2002, a federal magistrate concluded in Pacific Marine Conservation Council, Inc. v. Evans, 200 F. Supp.2d 1194 (N.D. Calif. 2002), that the Pacific Coast Groundfish FMP fails to establish a legally adequate bycatch reporting methodology because it fails to establish either a mandatory or adequate observer program. By establishing mandatory observer requirements for the at-sea processing sector of the groundfish fishery, this proposed rule in part responds to the court's ruling.

This action is necessary to satisfy the standardized bycatch reporting methodology requirements of the 1996 Sustainable Fisheries Act amendments to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). Under these requirements, a fishery management plan (FMP) must adopt a standardized reporting methodology for assessing the amount and kind of bycatch occurring in the fishery. In addition, this action will benefit fisheries conservation and management by providing information needed for enforcing fishery regulations, maintaining safe and adequate working conditions for observers, and establishing certification and performance standards for observers to ensure that quality

data are available for managing the fishery.

NMFS's ability to assure the integrity and availability of observer data in the future is constrained by the lack of regulatory requirements defining the needs of an observer program and mandatory coverage levels. NMFS believes that data quality will be maintained by creating a regulatory structure for managing observer and observer provider performance and assuring that participating vessels provide the basic amenities necessary for an observer to perform their required duties. In recent years the use of observer data to monitor incidental catch of overfished species and ESA listed salmonids has become increasingly important. In response to the court, and to maintain a source of quality data in the future and to establish a mandatory and adequate observer program aboard the at-sea processing fleet, NMFS believes that it is necessary to move forward with a revised proposed rule at this time.

2.0 ALTERNATIVE MANAGEMENT ACTIONS

Each alternative specifically addresses 1) the level of mandatory observer coverage for processing vessels, 2) certification requirements and decertification procedures for observers, 3) certification requirements and decertification procedures for businesses that provide observer service, and 4) the responsibilities of processing vessels that carry observers.

Alternative 1: (Status quo - voluntary program) *Do not establish mandatory observer coverage requirements for at-sea processing vessels. Do not establish certification requirements or decertification procedures for observers or businesses that provide observers. Do not define responsibilities for processing vessels that carry observers.*

Discussion: Under alternative 1, NMFS would continue to administer the program; vessels would continue to voluntarily carry NMFS-trained observers; businesses that are certified as observer providers for the federal groundfish fishery off Alaska would continue to provide observer services; and individual processing vessels would continue to pay the direct costs associated with carrying the observers.

As is currently done, each vessel would choose to carry the number of observers (usually 1-2, but it could be zero) they believe meets their needs. Although, the at-sea processing vessels have voluntarily carried observers since 1991 and all have carried two observers since 2001, there is no guarantee that the processors will continue to carry this number of observers in the future.

Under the voluntary whiting observer program there are no certification requirements for observers. In addition, there are no procedures or actions that NMFS may take to remove or censure individuals who are found to have violated program policies or unsatisfactorily performed the duties of an observer. Similarly, there are no regulatory or contractual requirements specifying the duties and responsibilities of companies who provide support services for whiting observers, nor are there any procedures or actions that NMFS may take to prohibit companies who violate policies or performance standards from providing further observer services. Although, contracting companies for the WOC whiting fishery have voluntarily followed the hiring, evaluating, and recruiting regulations that apply to the federal groundfish fisheries of Alaska, including hiring individuals who meet the minimum qualifications and submitting information used for scheduling training, briefing, debriefings, and maintaining the observer deployment database, at any time in the future they may chose not to continue to provide these services.

Under Alternative 1, no regulatory requirements would be established for processing vessels that carry observers. Federal regulations at 50 CFR 660.360 (Appendix B) establish vessel responsibilities for vessels that carry observers in the Pacific Coast groundfish fisheries. However, voluntarily carried observers in the at-sea processing fleet are not currently covered by these regulations. The observer regulations at 50 CFR 660.360 provide for: 1) safe working conditions; 2) access to communication and, navigational equipment, the bridge, state and federal logbooks, decks, holds, holding bins, and any other

space that may be used to hold, process, weigh or store fish; 3) notification when fish are being brought on board the vessels; 4) reasonable assistance to enable observers to carry out their duties; and 5) access to catch. In addition, prohibited actions defined at 50 CFR 660.302 do not apply to observers in the at-sea processing fleet. These prohibitions include: fish for or process fish without the required observer coverage; assault, resist, oppose, impede, intimidate, harass, bribe, or interfere with an observer or bias the observer's sampling procedures; tamper with, destroy or discard samples, equipment, records, photographic film, papers, or personal effects; require, pressure, coerce, or threaten an observer to perform crew duties.

Alternative 2 – (one observer-Council Preferred) *Adopt regulations to support an observer program for at-sea processing vessels, including mandatory coverage requirements for one NFMS-certified observer on each processing vessel. Establish certification requirements and decertification procedures for observers and the businesses that provide observers. Define the responsibilities of processing vessels that carry observers.*

Discussion: The current operational structure of the observer program would continue as described under Alternative 1, the status quo alternative. NMFS would continue to administer the program; vessels would continue to voluntarily carry NMFS-trained observers; businesses that are certified as observer providers for the federal groundfish fishery off Alaska would continue to provide observer services; and individual processing vessels would continue to pay the direct costs associated with carrying the observers. In essences, this rule would codify in federal regulation, the already existing program.

All at-sea processing vessels would be required to carry one observer whenever they fish (100% observer coverage). Additional NMFS-certified observers could be carried voluntarily, providing observers were available. With the exception of the mandatory coverage requirements, all other provisions under this rule would apply to any NMFS-certified observers carried by a vessel.

Under this alternative, certification requirements for observers would be defined and include: observer qualifications, terms of certification, responsibilities, and standards of conduct. In addition, procedures or actions that NMFS may take to revoke or suspend the certification of individuals who are found to have violated program policies or unsatisfactorily performed the duties of an observer would be defined. The suspension and decertification process, would allow observers the opportunity to submit documentary evidence or petitions prior to a final determination.

Alternative 2 would also define certification requirements for observer providers, those businesses that provide observer services. Observer provider certification requirements would include; observer provider responsibilities, deployment conditions, standards of conduct, and conflict of interest standards. Procedures or actions that NMFS may take to revoke or suspend an observer provider that unsatisfactorily performed the defined duties or who did not abide by the standards of conduct or conflict of interest standards would be defined under this alternative. This will allow NMFS to oversee the actions of contracting companies, and assure that the necessary information for routine program operation will continue to be provided in the future. As with observers, the suspension and decertification process, would allow observer providers the opportunity to submit documentary evidence or petitions prior to a final determination.

Under this alternative vessels would be required to provide observers with basic amenities. The observer's ability to accomplish their duties requires that the vessel provide: 1) notification of fish being brought aboard, 2) access to unsorted catch, 3) sufficient time to collect a sample, and 4) adequate space in which to collect and work up samples. Where appropriate, existing regulation (50 CFR 660.360 & 660.302) described under alternative 1 and found in Appendix B, would apply to all observers carried on board at-sea processing vessels. In addition, regulations would be developed that are specific to at-sea processing vessels requirements for: accommodations, communications equipment, at-sea transfers,

sample space, sampling stations, work tables, diverter boards, and sample. Because all at-sea processing vessels operating in the WOC whiting fishery also participate in the federal groundfish fisheries off Alaska where they must adhere to the Alaska observer regulations, proposed observer regulations for the WOC, would duplicate the Alaska regulations as much as practicable, recognizing differences in Pacific coast groundfish fisheries management strategies and objectives, and use of observer data.

Alternative 3 – (two observers--NMFS preferred*) Adopt regulations to support an observer program for at-sea processing vessels, including mandatory coverage requirements for two NMFS-certified observer on each processing vessel over 125 feet in length and one observer for each vessel 125 feet or less. Establish certification requirements and decertification procedures for observers and the businesses that provide observers. Define the responsibilities of processing vessels that carry observers.*

Discussion All at-sea processing vessels greater then 125 feet in length would be required to carry two NMFS-certified observers whenever they fish and all at-sea processing vessels 125 feet or less would be required to carry one observer whenever they fish. All other provisions would be the same as alternative 2.

2.1 Alternatives Considered but Rejected From analysis

A number of provisions included in the 1992 proposed rule are no longer relevant or will be addressed at a later date, therefore they have not been included in this EA/RIR/RFA or the revised proposed rule. Provisions of the 1992 proposed rule that have been excluded from this document are: requirement for permits on at-sea processors (which is irrelevant for catcher-processors since they now carry limited entry permits, but may be considered for motherships in the future); data reporting and recordkeeping requirements (the vessels currently keep and submit these reports voluntarily, but mandatory requirements may be implemented in the future); and trip limit definitions that apply to one-week periods (which is unnecessary given current use of cumulative limits).

Due to biological concerns, a no observer alternative was not considered. If the whiting allocation is greatly exceeded or if there are substantial discards of other species that go unmeasured, the long-term biological stability and yield of whiting or incidentally caught species may be affected. Without accurate and timely information, the risk of error associated with fishery management decisions will increase.

Since April 1999, when the Council recommended moving forward with certification and decertification requirements for observer providers, an alternative to regulations that would established the responsibilities of contracting companies via the Government contracting process and a statement of work or possibly a contract at "no-cost" has been discussed. The viability of a government procurement contract needs further research to determine if the contracting process would allow the use of such a mechanism for whiting observers.

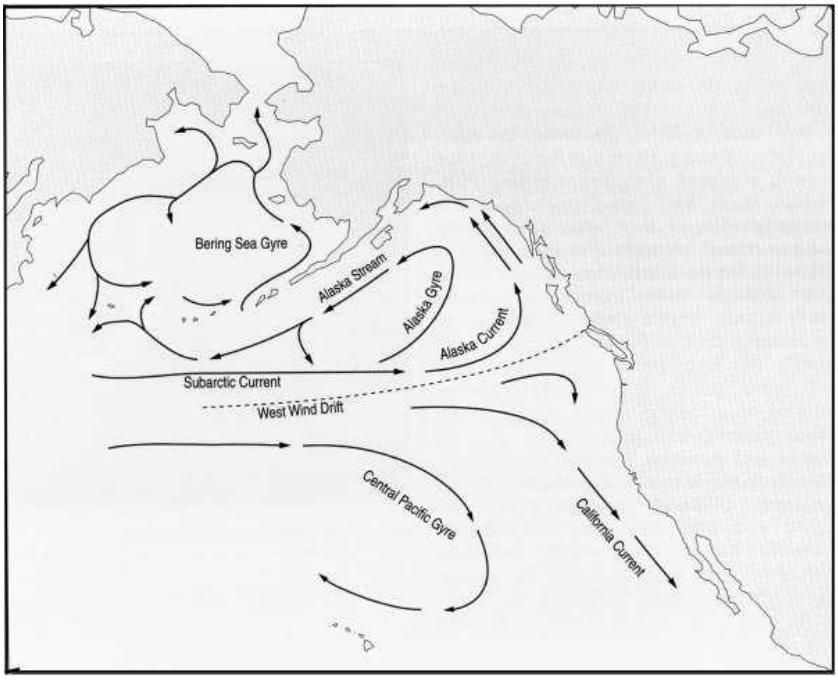
3.0 AFFECTED ENVIRONMENT

3.1 Physical Environment

California Current System

In the North Pacific Ocean, the large, clockwise-moving North Pacific Gyre circulates cold, sub-arctic surface water eastward splitting at the North American continent into the northward-moving Alaska Current and the southward-moving California Current (Figure 3.1.1). The California Current, a surface current, flows southward along the U.S. west coast and through the U.S. EEZ, the management area for the groundfish FMP. The California Current is known as an eastern boundary current, meaning that it draws ocean water along the eastern edge of an oceanic current gyre. Along the continental margin and beneath the California Current, waters off the U.S. West Coast are subject to major nutrient upwelling, particularly off Cape Mendocino (Bakun, 1996). Shoreline topographic features such as Cape Blanco, Point Conception and bathymetric features such as banks, canyons, and other submerged features, often create large-scale current patterns like eddies, jets, and squirts. Currents off Cape Blanco, for example, are known for a current "jet" that drives surface water offshore to be replaced by upwelling sub-surface water (Barth, et al, 2000). One of the better-known current eddies off the West Coast occurs in the Southern California Bight, between Point Conception and Baja California (Longhurst, 1998), wherein the current circles back on itself by moving in a northward and counterclockwise direction just within the Bight. The influence of these lesser current patterns and of the California Current on the physical and biological environment varies seasonally (Lynn, 1987) and through larger-scale climate variation, such as El Niño-La Niña or Pacific Decadal Oscillation (Longhurst, 1998).

Topography. Physical topography off the U.S. West Coast is characterized by a relatively narrow continental shelf. The 200 m depth contour shows a shelf break closest to the shoreline off Cape Mendocino, Point Sur, and in the Southern California Bight and widest from central Oregon north to the Canadian border as well as off Monterey Bay. Deep submarine canyons pocket the EEZ, with depths greater than 4,000 m common south of Cape Mendocino..



Essential Fish Habitat (EFH). EFH for Pacific coast groundfish is defined as the aquatic habitat necessary to allow for groundfish production to support long-term sustainable fisheries for groundfish and for groundfish contributions to a healthy ecosystem. The groundfish species managed by the FMP occur throughout the EEZ and occupy diverse habitats at all stages in their life histories. Some species are widely dispersed during certain life stages, particularly those with pelagic eggs and larvae; the essential fish habitat (EFH) for these species/stages is correspondingly large. On the other hand, the EFH of some species/stages may be comparatively small, such as that of adults of many nearshore rockfishes which show strong affinities to a

particular location or type of substrate. When these EFHs for all groundfish species are taken together, the groundfish fishery EFH includes all waters from the mean higher high water line, and the upriver extent of saltwater intrusion in river mouths seaward to the boundary of the U.S. EEZ.

The Pacific Coast groundfish FMP groups the various EFH descriptions into seven major habitat types called "composite" EFHs. This approach focuses on ecological relationships among species and between the species and their habitat, reflecting an ecosystem approach in defining EFH. The seven "composite" EFH identifications are as follows.

1. Estuarine - Those waters, substrates and associated biological communities within bays and estuaries of the EEZ, from mean higher high water level (MHHW, which is the high tide line) or extent of upriver saltwater intrusion to the respective outer boundaries for each bay or estuary as defined in 33 CFR 80.1 (Coast Guard lines of demarcation).

2. Rocky Shelf - Those waters, substrates, and associated biological communities living on or within 10 meters (5.5 fathoms) overlying rocky areas, including reefs, pinnacles, boulders and cobble, along the continental shelf, excluding canyons, from the high tide line MHHW to the shelf break (~200 meters or 109 fathoms).

3. Nonrocky Shelf - Those waters, substrates, and associated biological communities living on or within 10 meters (5.5 fathoms) overlying the substrates of the continental shelf, excluding the rocky shelf and canyon composites, from the high tide line MHHW to the shelf break (~200 meters or 109 fathoms).

4. Canyon - Those waters, substrates, and associated biological communities living within submarine canyons, including the walls, beds, seafloor, and any outcrops or landslide morphology, such as slump scarps and debris fields.

5. Continental Slope/Basin - Those waters, substrates, and biological communities living on or within 20 meters (11 fathoms) overlying the substrates of the continental slope and basin below the shelf break (~200 meters or 109 fathoms) and extending to the westward boundary of the EEZ.

6. Neritic Zone - Those waters and biological communities living in the water column more than 10 meters (5.5 fathoms) above the continental shelf.

7. Oceanic Zone - Those waters and biological communities living in the water column more than 20 meters (11 fathoms) above the continental slope and abyssal plain, extending to the westward boundary of the EEZ.

Life history and habitat needs for the species managed under the FMP are described in the EFH appendix to Amendment 11, which is available online at http://www.nwr.noaa.gov/1sustfsh/efhappendix/page1.html.

3.2 Biological Environment.

The Pacific Coast groundfish FMP manages over 80 species, many which are caught in multi-species fisheries. These species include an array of flatfish, rockfish, and roundfish, and occur throughout the EEZ and occupy diverse habitats at all stages in their life history. Information on the interactions between the various groundfish species and between groundfish and non-groundfish species varies in completeness. While a few species have been intensely studied, there is relatively little information on most. The biological status of most groundfish species have not been fully assessed.

The purpose of groundfish stock assessments is to describe the condition or status of a particular stock. The result of a stock assessment is typically a report on the health of the stock, a forecast of biologically sustainable harvest levels, and/or other recommendations that would maintain or restore the stock. Over the past 20+ years, groundfish assessments have primarily been concentrated on important

commercial and recreational species. These species account for most of the historical catch and have been the targets of fishery monitoring and resource survey programs that provide basic information for quantitative stock assessments. Full assessments provide information on the abundance of the stock relative to historical and target levels, and provide information on current potential yield. Partial assessments do not have enough data to provide for a full assessment. Within the range of full assessments, there is a wide range of data availability and resulting assessment certainty. Approximately four to ten full assessments are conducted each year; 26 species have been assessed (with varying degrees of completeness and precision). Several species are assessed approximately every three to four years, however some have been assessed only once, and only Pacific whiting is examined annually (both partial and full assessments are used for whiting).

Stocks with ABCs set by non-quantitative assessments typically do not have a recent, quantitative assessment, but there may be a previous assessment or some indicators of the status of the stock. Detailed biological information is not routinely available for these stocks, and ABC levels have typically been established on the basis of average historical landings. Typically, the spawning biomass, level of recruitment, or the current fishing mortality rates are unknown. Many species have never been assessed and lack the data necessary to conduct even a qualitative assessment (i.e., is trend up, down or stable?). ABC values have been established for only about 30 stocks.

An Acceptable Biological Catch (ABC) is established for every stock (a species or species group) where enough information is available. However, numerical Optimum Yields (OYs) have not been established for every stock. Species and species groups with ABCs include lingcod, Pacific whiting *(Merluccius productus),* sablefish *(Anoplopoma fimbria)*, POP (*Sebastes alutus*), shortbelly rockfish *(Sebastes jordani*) shortspine thornyhead (*Sebastolobus alascanus*), longspine thornyhead (*Sebastolobus altivelis*), widow rockfish (*Sebastes entomelas*), chilipepper rockfish (Sebastes goodei), splitnose rockfish (*Sebastes diploproa*), cowcod (*Sebastes levis*), darkblotched rockfish (*Sebastes crameri*), yellowtail rockfish (*Sebastes flavidus*), bocaccio (*Sebastes paucispinis*), canary rockfish (*Sebastes pinniger*), yelloweye rockfish (*Sebastes ruberrimus*), Dover sole (*Microstomus pacificus*), and the minor rockfish complexes (northern and southern minor rockfish complexes include a mix of nearshore, continental shelf, and continental slope species). The following groundfish stocks have been designated as "overfished" (less than 25% of its B_{MSY}): POP, bocaccio, lingcod, canary rockfish, cowcod, darkblotched rockfish, widow rockfish, yelloweye rockfish and Pacific whiting.

Pacific Whiting

Pacific whiting (whiting) is a semi-pelagic merlucciid (a cod-like fish species) distributed off the West Coast of North America from 25^{O} N. to 51^{O} N. latitude. Smaller populations of Pacific whiting occur in several of the larger semi-enclosed inlets of the northeast Pacific Ocean, including the Strait of Georgia, Puget Sound, and the Gulf of California. The whiting stock ranges from southern California to Queen Charlotte Sound with spawning primarily occurring off southern California from January to March. Adult whiting migrate seasonally, wintering and spawning along the continental shelf and offshore from Baja California to Point Conception, California. Spawning is greatest at depths between 130 and 500 m. Eggs and larvae of whiting are pelagic and are generally found in depths between 40 and 140 m. Eggs of the Pacific hake are neritic and float to neutral buoyancy. Adult whiting are epi-mesopelagic. Juveniles reside in shallow coastal waters, bays, and estuaries. Highest densities of whiting are usually between 50 and 500 m, but adults occur as deep as 920 m and as far offshore as 400 km. During the summer they move inshore and northward as far as Vancouver Island, British Columbia. Older (age 5+), larger, and predominantly female whiting migrate into Canadian waters. During El Niño years, a larger proportion of the stock migrates into Canadian waters, apparently due to intensified northward currents during the period of inactive migration (Dorn 1995). Whiting feeds on a variety of small fish, shrimp, and squid.

Smith (1995) recognizes three habitats used by coastal whiting: a narrow 30,000 km2 feeding habitat near the shelf break of British Columbia, Washington, Oregon and California populated 6-8 months per year; a broad 300,000 km2 open-sea area of California and Baja California populated by spawning adults in the winter and embryos and larvae for 4-6 months; and a continental shelf area of unknown size off California and Baja California where juveniles brood (Bailey 1981, Bailey et al. 1982, NOAA 1990).

Mathematical models that use a variety of survey and observer data to assess stock size, harvest levels, recruitment, etc. are used to estimate a single ABC for the entire U.S. Canadian coastal stock (Figure 3.2.1). The whiting stock biomass increased to a historical high of 5.8 million metric tons (mt) in 1987 due to exceptionally large 1980 and 1984 year classes, then declined as these year classes passed through the population and were replaced by more moderate year classes. The stock size stabilized briefly between 1995-1997, but has declined continuously over the past several years to its lowest point in 2001. The 2002 stock assessment estimated that the biomass in 2001 was 0.7 million mt, and that the female spawning biomass was less than 20 percent of the unfished biomass. Because the overfished threshold under the FMP is 25 percent of the unfished biomass, the whiting stock was considered to have been overfished in 2001. On April 15, 2002 Pacific whiting was declared overfished (67 FR 18117). The female spawning biomass is estimated to increase over the next 3 years due to the incoming 1999 year-class, but the increase will be dependent upon the magnitude of that cohort as well as the exploitation rate.

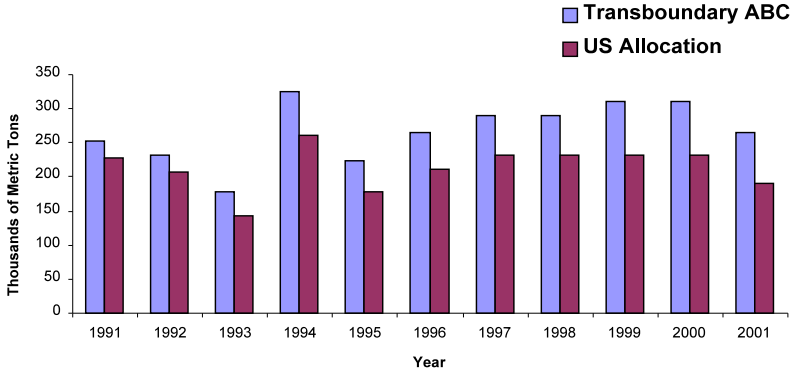


Figure 3.2.1 Annual Transboundary ABC and US allocation, 1991-2001

Non-whiting

Pacific whiting undertake a diurnal vertical migration and tend to form extensive midwater aggregations during the day, these dense schools occur between the depths of 100 and 250 meters (Stauffer 1985). Because whiting disperse throughout the water column at dusk and remain near the surface at night, fishing has traditionally occurred during the daylight hours. The results of fishing on concentrated midwater schools results in almost pure catches, with incidental catch typically amounting to less than 3% of the total catch by weight.

Species that are incidentally taken in the whiting fishery may be commingled with whiting or merely in the vicinity of whiting schools, depending on the relationships between the various species. Major factors affecting bycatch are area, depth, season, time of day, and environmental conditions. Overall abundance of a particular species is also relevant. The most common groundfish species, by weight, that were incidentally[1] taken in the 2001 whiting fishery were yellowtail rockfish, widow rockfish, Pacific Ocean perch , sablefish, spiny dogfish (*Squalus acanthias*), and several "other rockfish" species. Table 3.2.1 shows the 2001 estimates of incidental take of these species as well as the incidental take of overfished groundfish species.

Several species managed under the Coastal Pelagic Species Fishery Management Plan, were also incidentally taken in 2001, these include jack mackerel (*Trachurus symmetricus*), Pacific mackerel (*Scomber japonicus*), and squid. Like whiting, these are schooling fish that are not associated with the

[1] Limited entry trip limits for non-whiting groundfish apply to incidental catch taken by vessels in the at-seas processing sectors. In addition, regulations at 50 CFR 660.323 (a)(3)(vi) provide for bycatch reduction and full utilization for at-sea processors.

ocean bottom, and that migrate in coastal waters. Walleye pollock (*Theragra chalcogramma*) and American shad (*Alosa sapidissima*) were also observed in the 2001 fishery. Small amounts of other species were also incidentally taken, but were of small magnitude and are not presented here. Additonal biological information of groundfish species can be found in the EIS prepared for the 2003 groundfish annual specifications and management measures.

Table 3.2.1. Total catch (including discards) and incidental catch rates (kg/mt whiting) of major bycatch species taken by each sector of the at-sea whiting fleet in 2001

2001	Non-tribal At-sea		Tribal		All Sectors	
Species	Catch [1] (mt)	Bycatch Rate	Catch [1] (mt)	Bycatch Rate	Catch (mt)	Bycatch Rate
Groundfish Species that have not been declared as overfished						
Whiting	94,451		6,080		100,531	
Yellowtail Rockfish	125	1.32	87	14.31	212	2.11
Sablefish	22	0.23	0	0.00	22	0.22
Rex Sole	18	0.19	0	0.00	18	0.18
Spiny Dogfish Shark	78	0.83	153	25.16	231	2.30
Shortspine Thornyhead	15	0.16	0	0.00	15	0.15
Redstripe Rockfish	18	0.19	0	0.00	18	0.18
Shortbelly Rockfish	27	0.29	0	0.00	27	0.27
Rougheye Rockfish	20	0.21	0	0.00	20	0.20
Splitnose Rockfish	25	0.26	0	0.00	25	0.25
Overfished Groundfish Species (<25% of unfished biomass)						
Bocaccio Rockfish	0	0.00	1	0.16	1	0.01
Canary Rockfish	2	0.02	2	0.33	4	0.04
Cowcod	0	0.00	0	0.00	0	0.00
Darkblotched Rockfish	12	0.13	0	0.00	12	0.12
Lingcod	1	0.01	0	0.00	1	0.01
POP	20	0.21	1	0.16	21	0.21
Yelloweye Rockfish	0	0.00	0	0.00	0	0.00
Widow Rockfish	169	1.79	3	0.99	172	1.71
Non Groundfish Species						
Jack Mackerel	107	1.13	3	0.49	110	1.09
Pacific Mackerel	47	0.50	19	3.13	66	0.66
American Shad	57	0.60	59	9.70	116	1.15
Walleyed Pollock	6	0.06	360	59.21	366	3.64
Squid, unidentified	55	0.58	0	0.00	55	0.55

1/ Estimates based on 2001 NORPAC observer data

Salmonids

The following salmonids, which may be incidentally taken with groundfish gear, have been listed under the ESA by NMFS. Sacramento River winter chinook, Snake River fall chinook, Snake River spring/summer chinook, Central Valley spring chinook, California coastal chinook, Puget Sound chinook, Lower Columbia River chinook, Upper Willamete River chinook, Upper Columbia River spring chinook, Hood Canal summer run chum, Columbia River chum, Central California coastal coho, Oregon coastal coho, Southern Oregon/Northern California coho, Snake River sockeye, Ozette Lake sockeye, Southern California steelhead, South-central California steelhead, central California coast steelhead, upper Columbia River steelhead, Snake River Basin steelhead, Lower Columbia River steelhead, California Central Valley steelhead, Upper Willamette River steelhead, Middle Columbia River steelhead, Northern California steelhead. Review of observer data indicates that the steelhead, sockeye, and cutthroat are rarely, if ever, encountered in the whiting fishery. Chum and coho are caught in relatively low numbers, while chinook are the most common salmonid encountered in the whiting fisheries (NMFS, December 15, 1999).

ESA Listed Salmonids Occurring in the WOC

Listed under ESA as threatened species

Coho Salmon
- Central CA ESU
- Southern OR/Northern CA Coasts ESU
- OR Coast ESU

Chinook Salmon
- Snake River Fall-run ESU
- Snake River Spring/Summer-run ESU
- Puget Sound ESU
- Lower Columbia River ESU
- Upper Willamette River ESU
- Upper Columbia River Spring-run ESU
- Central Valley Spring-run ESU
- CA Coastal ESU

Chum Salmon
- Hood Canal Summer-run ESU
- Columbia River ESU

Sockeye Salmon
- Ozette Lake ESU

Steelhead Salmon
- South-Central CA Coast ESU
- Central CA Coast ESU
- Upper Columbia River ESU
- Snake River Basin ESU
- Lower Columbia River ESU
- CA Central Valley ESU
- Upper Willamette ESU
- Middle Columbia River ESU
- Northern CA ESU

Listed under ESA as endangered species

Chinook Salmon
- Sacramento River Winter-run ESU

Sockeye Salmon
- Snake River ESU

Steelhead Salmon
- Southern CA ESU

Because several chinook salmon runs are listed under the ESA, bycatch of chinook salmon is a concern in the at-sea whiting fishery. In 2001, 847 chinook or 0.014 chinook per metric ton of whiting were taken by the catcher-processor fleet, 1,721 chinook or 0.048 chinook per metric ton of whiting were taken by the non-tribal mothership fleet, and 959 chinook or 0.158 chinook per metric ton of whiting were taken by the tribal whiting fishery (Table 3.2.2). In 2000, 1,839 chinook or 0.027 chinook per metric ton of whiting were taken by the catcher-processor fleet, 4,420 chinook or 0.094 chinook per metric ton of whiting were taken by the non-tribal mothership fleet, and 1,947 chinook or 0.312 per metric ton of whiting were taken by the tribal whiting fishery.

Table 3.2.2. Total catch of salmon (number) and chinook salmon bycatch rates (number of salmon/mt of whiting) taken by each sectors of the at-sea processing fleet, 1999-2001

2001	Catcher-processors		Non-tribal Motherships		Tribal Mothership	
Species	Catch (no.)	Bycatch Rate	Catch (no.)	Bycatch Rate	Catch (no.)	Bycatch Rate
Chinook	847	0.014	1,721	0.048	959	0.158
Other Salmon	146		624		16	
2000	Catcher-processors		Non-tribal Motherships		Tribal Mothership	
Species	Catch (no.)	Bycatch Rate	Catch (no.)	Bycatch Rate	Catch (no.)	Bycatch Rate
Chinook	1,839	0.027	4,420	0.094	1,947	0.312
Other Salmon	88	0.001	27	0.001	16	0.003
1999	Catcher-processors		Non-tribal Motherships		Tribal Mothership	
Species	Catch (no.)	Bycatch Rate	Catch (no.)	Bycatch Rate	Catch (no.)	Bycatch Rate
Chinook	2,704	0.040	1,687	0.036	4,497	0.174
Other Salmon	296		506		278	

Summarized from NMFS NORPAC observer data.

The estimated coastwide bycatch of chinook in the whiting fishery, including the shorebased component, has averaged 7,067 fish annually since 1991. Limits on chinook bycatch in the whiting fishery were established as result of the September 27, 1993 biological opinion under the ESA. This opinion established the bycatch rate of 0.05 chinook salmon/mt of whiting with an 11,000 fish threshold for the entire whiting fishery (at-sea and shore-base sectors combined). Reinititiation of the biological opinion is required if both the bycatch rate and bycatch limit are exceeded (NMFS 1996a). Table 3.2.3 shows the incidental annual catch of chinook salmon for all sectors of the whiting fleet combined (at-sea and shorebased), from 1991 to 2001. Values in bold indicate years in which the threshold established in the biological opinion was exceeded.

Table 3.2.3. Incidental catch of Chinook Salmon in the whiting Fishery 1991-2001, all sectors

Year	Whiting (mt)	Chinook Salmon (no.) [1]	Bycatch Rate (no/mt whiting)[1]
1991	222,114	6,194	0.0279
1992	201,168	4,753	0.0236
1993	135,516	5,387	0.0398
1994	248,768	4,605	0.0185
1995	175,255	**15,062**	**0.0859**
1996	212,739	2,327	0.0109
1997	232,958	5,896	0.0253
1998	232,587	5262	0.0226
1999	224,459	10,579	0.0471
2000	202,527	**11,516**	**0.0569**
2001	173,857	6,161	0.0354

[1] Values in bold indicate years in which the threshold established in the biological opinion was exceeded.

During the 2000 Pacific whiting season, the whiting fisheries exceeded the chinook bycatch amount specified in the Pacific whiting fishery Biological Opinion's (December 15, 1999) incidental take statement estimate of 11,000 fish, by approximately 500 fish. In the 2001 whiting season, however, the whiting fishery's chinook bycatch was about 7,000 fish, which approximates the long-term average. After reviewing observer data and industry proposed bycatch reduction measures for salmon, the status of the affected listed chinook, environmental baseline information, and the incidental take statement from the 1999 whiting BO, NMFS determined in a letter dated April 25, 2002 that a re-initiation of the 1999 whiting BO was not required.

Marine Mammal Interactions

The EEZ waters off Washington, Oregon, and California support a wide variety of marine mammals. Approximately thirty species, including seals, sealions, sea otters, whales, dolphins, and porpoise. Many marine mammal species seasonally migrate through Pacific coast waters, while others are year round residents. Incidental take of marine mammals by the at-sea sector of the whiting fleet is infrequent and has been well documented by observers since the early 1980s.

The MMPA and the ESA are federal legislation that guide marine mammal species protection and conservation policy. On the Pacific Coast, NMFS is responsible for the management of cetaceans and pinniipeds, while the U.S. Fish and Wildlife Service manages sea otters. New information is used every year to prepare stock assessment for strategic stocks and every three years to prepare stock assessments for non-strategic stocks. Strategic stocks are those whose human-caused mortality and injury exceeds the Potential Biological Removal (PBR) level. Marine mammals whose abundance falls below the optimum sustainable population level can be listed as "depleted". Under the ESA, species in danger of extinction throughout all or a significant portion of their range can be listed as "endangered", and species likely to become endangered in the foreseeable future can be listed as "threatened". Populations listed as endangered, or threatened under the ESA are automatically depleted under the terms of the MMPA.

ESA and MMPA Listed Marine Mammals Occurring in the WOC

Listed under ESA as threatened species
- Steller sea lion (*Eumetopias jubatus*)
- Guadalupe fur seal *(Arctocephalus townsendi)*
- Southern sea otter *(Enhydra lutris)*

Listed under MMPA as depleted species
- Sperm whale *(Physeter macrocephalus)*
- Humpback whale *(Megaptera novaeangliae)*
- Blue whale *(Balaenoptera musculus)*
- Fin whale *(Balaenoptera physalus)*

Fisheries that interact with species listed as depleted, endangered, or threatened may be subject to management restrictions under the ESA and MMPA. NMFS publishes an annual list of fisheries in the Federal Register separating commercial fisheries into one of three categories, based on the level of serious injury and mortality of marine mammals that occurs incidentally in the fishery. The categorization of a fishery in the list determines whether participants in that fishery are subject to certain provisions of the MMPA, such as registration, observer coverage, and take reduction plans. The Pacific Coast groundfish fisheries are considered a category III fisheries where the annual mortality and serious injury of a marine mammal stock by the fishery is less than or equal to 1 percent of the PBR level.

Since 1994, observers in the Pacific whiting fishery have observed incidental takes of the following marine mammals species: Steller sea lion (*Eumetopias jubatus*), California sea lion (*Zalophus californianus*), northern elephant seal (*Mirounga angustirostris*), harbor seal (Phoca *vitulina*), Pacific white-side dolphin (*Lagenorhynchus obliquidens)*, and Dall's porpoise (*Phocoenoides dalli*). Incidental mortality levels of marine mammals in the at-sea whiting fishery, is available by species, for 1994 and 1999, can be seen in Table 3.2.4. More recent data could not be obtained.

Table 3.2.4 Mortality levels of marine mammals incidentally caught by at-sea processing trawl vessels in the Pacific whiting fishery, 1994-1999

Species	Year	Observed Mortality	Estimated Annual Mortality
California sea lion (*Zalophus californianus*)	1994	1	2
	1995	0	0
	1996	0	0
	1997	0	0
	1998	1	1
	1999	2	2
Pacific white-sided dolphin (*Lagenorhynchus obliquidens*)	1994	0	0
	1995	0	0
	1996	0	0
	1997	0	0
	1998	1	1
	1999	0	0
Dall's porposie (*Phocoenoides dalli*)	1994	0	0
	1995	0	0
	1996	0	0
	1997	5	27
	1998	2	3
	1999	1	2
Northern elephant seal (*Mirounga augustirostris*)	1994	*	*
	1995	*	*
	1996	*	*
	1997	0	0
	1998	1	1
	1999	1	*
Stellar sea lion (*Eumetopias jubatus*)	1994	*	*
	1995	*	*
	1996	*	*
	1997	2	11
	1998	0	0
	1999	0	0
Harbor seal (Phoca vitulina)	1994	0	0
	1995	0	0
	1996	1	0
	1997	1	5
	1998	0	0
	1999	0	0

* indicates these data were not available from the sources used to complete this table
Sources: U.S. Pacific Marine Mammal Stock Assessments: 2000; Implementation of an Observer Program for the At-sea Processing Vessel in the Pacific Coast Groundfish Fishery, 2001; M. Perez, biologist, NMML, July 24, 2000.

Seabirds Interactions

Impacts of human activities on seabirds occur through direct mortality from collisions with vessels, entanglement with fishing gear, entanglement with discarded plastics and other debris, and shooting. Indirect impacts include competition with fisheries for food, alteration of the food web dynamics due to commercial and recreational removals, disruption of avian feeding habits resulting from dependency on fish wastes, fish-waste related increases in species (i.e. gulls) populations that prey of other bird species, and marine pollution and changes in water quality.

ESA Listed Sea birds Occurring in the WOC

Listed under ESA as threatened species
- Marbled murrelet (Brachyramphs marmoratus)

Listed under ESA as endangered species
- Short-tail albatross (Phoebastria (Diomedea) albatrus)
- California brown pelican (Pelecanus occidentalis)
- California least tern (Sterna antillarum browni)

Seabirds are caught incidentally to all types of fishing operations, but the vulnerability of bird species to gear types differ with feeding ecology. Pelagic trawl fishing gear is used in the Pacific whiting fishery. Trawl gear appears to catch surface-feeding and diving birds that are feeding and scavenging while the net is being set and retrieved. Since 1996, observers in the Pacific whiting fishery have documented incidental takes of the following seabirds: puffin, northern fulmar, shearwater, and unidentified tubenose, and black-footed albatross (Table 3.2.5).

Table 3.2.5 Incidental Catch of Seabird in Pacific Whiting Observer Samples, 1996-2001

Year	Species		Number is samples
1996	Unidentified puffin	*Fratercula spp.*	1
1997	Northern fulmar	*Fulmarus glacialis*	1
	Dark shearwater	*Puffinus tenuirostris*	1
	Unidentified tubenose	*Procellariiformes*	1
1999	Unidentified seabird		1
2000	Unidentified petrel/shearwater	*Procellariidae*	1
2001	Black-footed albatross	*Diomeda nigripes*	1

Source: NORPAC observer data

Sea Turtle Interactions

Four species of sea turtles are found in the EEZ off Washington, Oregon, and California; three of these species are listed as endangered under the ESA (green, leatherback, and olive Ridley) and one is listed as threatened (loggerhead). Whiting observer data collected since 1991, does not contain any occurrences of incidental sea turtle takes.

Endangered Species

Specific discussion of species listed under the ESA can be found above in the sections titled salmonids, marine mammals, sea birds and sea turtles.

ESA Listed Sea Turtles Occurring in the WOC

Listed under ESA as threatened species
- Loggerhead (*Caretta caretta*)

Listed under ESA as endangered species
- Green (*Chelonia mydas*)
- Leatherback (*Dermochelys coriacea*)
- Olive Ridley (*Lepidochelys olivacea*)

3.3 Socio-economic Environment

History of the Fishery

During the late 1970s and 1980s, the whiting fishery was conducted primarily by foreign fishing vessels and by joint venture partnerships between foreign and U.S. firms (Joint ventures were arrangements between U.S. catcher vessels and foreign companies, where the U.S. fishers would catch and deliver whiting to foreign processing vessels.) Fishing operations during this period were low intensity compared to those of the 1990s, and fishing lasted from April through September or October. In the late 1980s, surimi technology was introduced and the fishery immediately changed to a fast-paced competition for the available quota. (Surimi is a thick, paste-like or gel product made from washing and de-watering fish flesh. It is further processed to create such products as artificial crab legs, shrimp, etc.) Coastwide Pacific Whiting harvests from 1965-2001 can be seen in Figure 3.3.1. This pattern continued in the early 1990s when U.S. firms preempted all foreign fishing and processing activities.

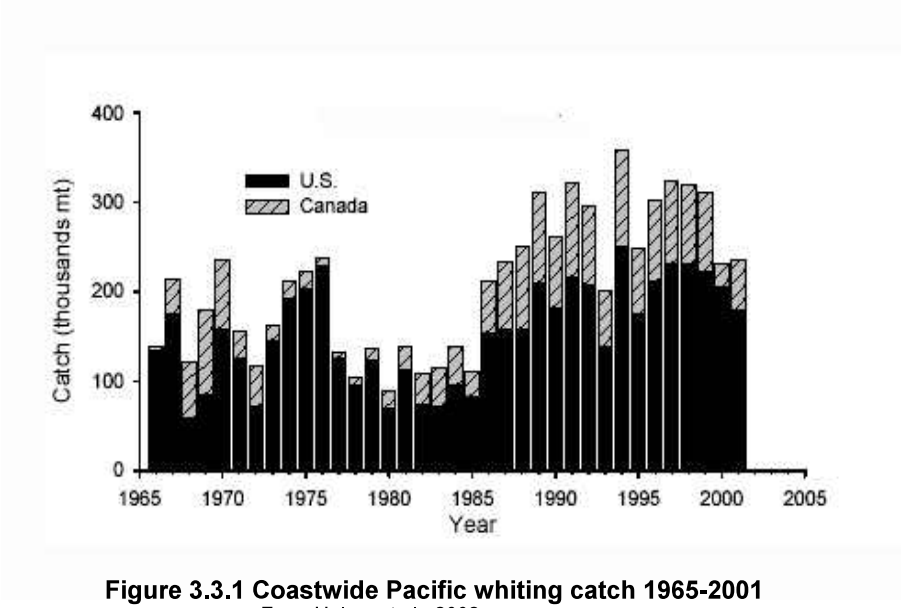


Figure 3.3.1 Coastwide Pacific whiting catch 1965-2001
From Helser et al. 2002

By 1991, surimi technology and market conditions for whiting were sufficiently developed to allow for large scale production. This resulted in an influx of high capacity domestic catcher/processors and mothership processors which were capable of fully harvesting the whiting allocation. As these high volume domestic processors joined the fishery, the fishing pattern of the 1980s and early 1990s was replaced by a fast-paced fishery concentrated earlier in the season and farther south (PFMC 1998). The pattern of earlier and more southern fishing changed in 1992 with the implementation of regulations designed to minimize the bycatch of salmon and rockfish in the whiting fishery.

The Current Whiting Fishery

The domestic whiting industry is generally described as being composed of the tribal and commercial fisheries each of which have their own allocations. The commercial fishery is composed of the shore-based, catcher/processor and mothership sectors. Separate allocations have been provided to each commercial sectors since 1997. In 2001, as in previous years, a portion of the 190,400 mt OY was set aside for treaty Indian tribes on the coast of Washington state (27,500 mt). The remaining amount 162,900 mt, the commercial OY was further divided with 34% (55,386) going to the catcher/processor sector; 24% (39,096) going to the mothership sector; and 42% (68,418) going to the shore-based sector.

The whiting fishery occurs primarily during April-November along the coasts of northern California, Oregon, Washington, and British Columbia (Figure 3.3.2). The fishery is conducted almost exclusively with midwater trawls. Most fishing activity occurs over bottom depths of 100-500 m, but offshore extensions of fishing activity have occurred.

The At-sea Processing Fleet

There are two classes of vessels in the at-sea processing sector of the whiting fishery, catcher-processors that harvest and process their own catch, and mothership vessels that process unsorted catch received from smaller catcher vessels. The processing vessels are large (>250 ft in length) and carry crews of 65-200, who mostly work in shifts to keep the factories operating day and night.

The first year of implementation of a license limitation program in the Pacific groundfish fishery was 1994. Vessels that did not initially qualify for a permit had to buy or lease one from qualifying vessels to gain access to the fishery. To harvest whiting, all at-sea catcher-processors had to purchase or lease permits. This changed the composition of the at-sea processing fleet considerably, increasing the number of motherships, because permits are not required for vessels that only process (PFMC 1998). Unlike catcher/processors and catcher vessels, motherships do not have permits to harvest groundfish in the WOC.

In 2001, 20 non-tribal catcher vessels delivered whiting to 5 mothership processors and 4 tribal catcher vessels delivered whiting to a single mothership. Some vessels may deliver catch exclusively to motherships off Alaska and the west coast, but in recent years, about half of the non-tribal catcher vessels also delivered whiting to shore-based processing facilities in Washington, Oregon and California. Similarly,

the mothership that processed tribal whiting also processes whiting in the non-tribal sector before the start of the tribal fishery. In 2001, 7 catcher/processors participated in the whiting fishery. Table 3.2.1 shows the number of at-sea whiting processors by sector.

Table 3.3.1. Number of at-sea whiting processors by sector, 1997 - 2001

	Catcher-processor	Mothership	Tribal
1997	10	6	1[1]
1998	7	6	1[1]
1999	6	6	1[1]
2000	8	8	1[1]
2001	7	5	1[1]

Summarized from NMFS NORPAC observer data

1- Vessel also processed catch in the mothership sector

Since May 1997, when the Department of Justice approved allocation of whiting shares among the members of the Whiting Conservation Cooperative, the catcher-processor fishery has operated as a voluntary quota share program where each of the catcher-processor companies has agreed to take a specific share of the harvest. With harvests assured, the catcher-processors are able to operate more cautiously to avoid areas of salmon and rockfish abundance. The motherships however, operate under more competitive conditions (first come first served) for their sector's allocation. Table 3.3.2 shows landings by year from 1997 through 2001. The U.S. whiting allocation has been fully utilized by domestic processors since 1992.

Table 3.3.2. Whiting landings (retained) by at-sea processing sectors, 1997 - 2000, metric tons

	Catcher-processor	Mothership	Tribal	All At-sea Sectors
1997	68,796	49,460	24,748	143,004
1998	69,692	49,705	23,846	143,243
1999	67,679	47,580	25,844	141,103
2000	67,649	46,710	6,251	120,610
2001	58,422	35,658	6,080	100,160

Summarized from NMFS NORPAC observer data

Whiting is a high volume species, but it commands a relatively low price per pound. The at-sea processing vessels have onboard surimi production capacity and were initially designed to fish for pollock in the groundfish fisheries off Alaska. Because whiting is a similar species to pollock, harvesting and processing technology and equipment used in the Alaskan fisheries is also used for whiting. In addition, to surimi, most of these vessels have the capacity to produce frozen fillet blocks and have fish meal plants to process small whiting, incidentally caught groundfish species and fish offal. The whiting catch for the at-sea sector by month and by area can be seen in Figures 3.3.2 and 3.3.3.

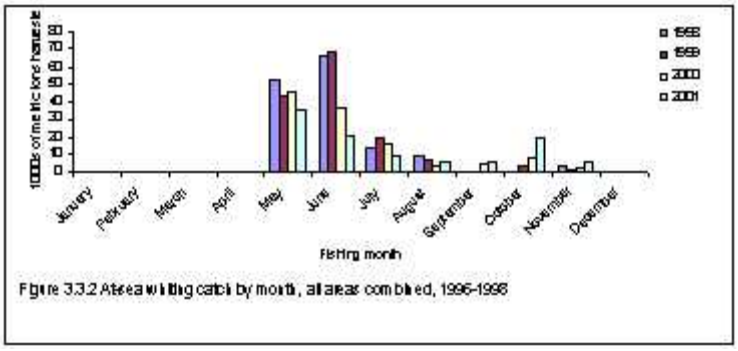


Figure 3.3.2 At-sea whiting catch by month, all areas combined, 1996-1998

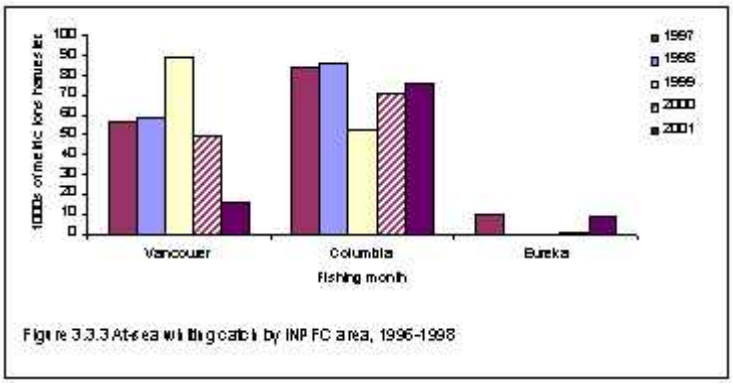


Figure 3.3.3 At-sea whiting catch by INPFC area, 1996-1998

The Tribal Whiting Fishery

The Pacific Coast treaty Indian fishing rights, described at 50 CFR 660.324, allow for the allocation of fish to the treaty Indian fisheries through the annual specification and management process. Pacific coast treaty Indian tribes include the Hoh, Makah, and Quileute Indian Tribes and the Quinault Indian Nation. The fishing right is generally described as the opportunity to take a fair share of the fish, which has been interpreted as up to 50 percent of the harvestable surplus of fish in the U & A. Washington v. Washington State Comm'l Pass Fishing Vessel Ass'n, 443 U.S. 658, 685-687 (1979). U.S. v. Washington, 459 F. Supp. 1020, 1065 (1978). Makah v. Brown, No. C85-160R, and United States v. Washington, Civil No. 9213 - Phase I, Subproceeding No. 92-1 (W.D. Wash., Order on Five Motions Relating to Treaty Halibut Fishing, at 6, Dec. 29, 1993). U.S. v. Washington, 873 F. Supp. 1422, 1445 & n. 30 (W.D. Wash. 1994); 157 F. 3d 630, 651, 652 (9th Cir. 1998)

Since 1996, a portion of the whiting OY has been allocated specifically to the Pacific Coast treaty tribes. The tribal allocation is subtracted from the whiting OY before allocation to the other sectors. In 1998, 25,000 mt of the 232,000 mt U.S. allocation, was set aside for treaty Indian tribes on the coast of Washington state. Since 1999, the tribal allocation has been based on a framework that is a sliding scale related to the U.S. whiting OY (Table 3.3.3). In 1999 and 2000, NMFS determined that the tribal request of 32,500 mt was a reasonable accommodation of the treaty right in view of the uncertainty surrounding the appropriate quantification. In 2001, the tribal allocation was 27,500 mt.

The Pacific Coast treaty tribes are co-managers of the whiting resourse. As co-managers the tribes monitor and regulate their fishing so as not to exceed the allocation. To date, only the Makah tribe has fished on the tribal whiting allocation.

Table 3.3.3 The tribal framework for whiting allocation, adopted in 1999

U.S. Optimum Yield	Makah Allocation
Up to 145,000 mt	17.5% of the U.S. OY
145,001 mt to 175,000 mt	25,000 mt
175,001 mt to 200,000 mt	27,500 mt
200,001 mt to 225,000 mt	30,000 mt
225,001 mt to 250,000 mt	32,500 mt
Over 250,000 mt	35,000 mt

Observers

Since 1991, all at-sea processors carried at least one observer when they participated in the whiting fishery. To provide additional data for monitoring their voluntary individual quota program, catcher-processor vessels have generally carried two observers, since 1997. This is in contrast to the mothership sector which began carrying two observers on most vessels in 2000 to provide additional data for bycatch monitoring. Since 1996, the tribal mothership has typically carried two observers when they participated in the whiting fishery.

Observers are a uniformly trained group of technicians who's objectives are data gathering. They are stationed aboard vessels to gather independent data about the fish that are taken or received by the vessel. Standardized sampling procedures, defined by NMFS, are intended to provide statistically reliable data for fleetwide monitoring of the fishery. The primary duties of an observer include: estimating catch weights; determining catch composition; collecting length and weight measurements, and doing sex determinations. Data collected by observers are compiled for the purpose of estimating overall catches of groundfish; estimating incidental catch of species not allowed to be retained by these vessels; and for assessing stock condition.

To be an observer, an applicant must have a bachelor's degree in fisheries, wildlife biology, or a related field of biology or natural resource management. Observers must be capable of performing strenuous physical labor, and working independently under difficult conditions without direct supervision. To date, the only individuals who have successfully completed at least one cruise as an observer in the federal groundfish fishery off Alaska, have been deployed as observers in the Pacific whiting fishery. Incidentally caught species in the WOC can be difficult to identify, experienced observers are able to focus more on species identification rather than on learning the sampling protocols.

Observer Providers

Businesses that met the certification requirements for the Alaskan groundfish observer program have been providing observer support services in the whiting fishery since 1991. Observer support services typically include: recruiting, evaluating, and hiring qualified candidates; providing for specific levels of compensation and insurance coverage; providing observers' salary, benefits and personnel services in a timely manner; providing all logistical support for placing and maintaining observers aboard the vessels (travel arrangements, lodging, per diem, and other relevant services); maintaining communications with deployed observers; ensuring that all in-season catch messages and other required transmissions between observers and NMFS are delivered within a specified time frame; providing an employee who is on call 24 hours a day to handle emergencies involving observers or problems concerning observer logistics; ensuring that observers meet debriefing obligations are met; and ensuring that all sampling and safety gear are returned to NMFS.

An individual or business seeking to become an observer provider for the Alaska groundfish fisheries, must submit an application to the Alaska Regional Administrator describing the applicant's ability to carry out the responsibilities and duties of an observer provider including the arrangements and methods that will be used. The Alaska Regional Administrator may select one or more observer providers based on the information submitted by the applicant and on other selection criteria that are available from the Observer Program Office. Observer providers can be placed on probation, decertified, or suspended by NMFS to address performance or behavior.

Fishing Communities

The Seattle/Tacoma Metropolitan Area

Historically, in terms of majority ownership as well as localization of corporate and support operations, the catcher-processor and mothership sectors have a strong presence in Seattle and the Puget Sound area. The catcher vessel fleet for motherships tends to have Seattle owners and to be maintained in the Seattle/Pacific northwest region. Some catcher vessels have California or Oregon owners and connections with Oregon. Catcher processor vessels are moored and maintained in the Seattle/Tacoma

area. The Port of Seattle has made a sizeable investment in renovating part of Pier 91, partly in response to the need of the largest catcher processor company for moorage and other workspace for its operations. Labor forces on the processing vessels are predominately Seattle-based. Most employees are from Washington or other western states, with Seattle being the major (or only) point of hire. Turnover varies from year-to-year and is highly dependent on levels of compensation. Some people make careers of working on catcher processors, while others treat it as a seasonal activity or a "stage of life"activity.

As a community, Seattle/Tacoma is home to a large proportion of those in the whiting fishery. The Puget Sound region encompasses a large metropolitan area and containing 3.8 million residents, retail trade and services are extremely important economic sectors and are the two largest in employment. Manufacturing employs more people than the government sector, followed by finance, construction, wholesale trade, and transportation. The military, civilian federal, agricultural, and mining sectors are relatively small. The fishing industry has a significant presence in parts of western washington, but is greatly overshadowed in terms of employment by other industry sectors. In relative terms, this fishery is a negligible component of the overall economy of the Seattle/Tacoma area.

Natural Resource Consultants (NRC 1986, 1999) compiled comprehensive accounts of commercial fishing activity by the Seattle and Washington State fishing fleet. In terms of weight or volume, 92 percent of the seafood harvested by Washington fishermen came from Alaskan waters, and only 7 percent from local waters. In terms of ex-vessel value, the Alaskan harvest was worth $283 million and local harvest $110 million (and other harvest $8 million). This has not changed to an appreciable degree in recent years. Alaskan distant waters fisheries still provide 95 percent of the harvest for the Washington state fishing fleet (NRC 1999).

The Oregon Coast Area

The Oregon Coast area encompasses Tillamook County, Lincoln County, and Clatsop County. This area includes those ports and communities in Oregon with the most direct ties to the at-sea whiting fishery. The most visible aspect of this participation is the fleet of catcher vessels based in Newport, Oregon. The Oregon Coast economy is relatively diversified and relies heavily on the retail, service, and government sectors. Fish and timber are also significant components of the multi-industry “agriculture, forestry, fishing, and other” and “manufacturing” categories. Manufacturing, as measured by earnings, is similar in magnitude to the retail trade, service, and government sectors. As an aggregated category, however, it is not clear how much of this magnitude is due to fish related activity. It is almost certain that little of this manufacturing activity is related to the at-sea whiting fishery.

Radtke and Davis (1998a, 1998b, 1999a, 1999b) description of the Oregon commercial fishing industry indicates that for the state as a whole, fisheries income comprises only about 0.3 to 0.4 percent of all personal income, or about 0.5 to 0.6 percent of all earned income. For all coastal Oregon communities, fisheries income comprises about 5.2 percent of income from all sources, or 9.7 percent of earned income. For Coos Bay, the percentages are 2.1 and 3.9, for Astoria 8.8 and 14.7, and for Newport 10.6 and 20.4.

4.0 ANALYSIS OF THE ALTERNATIVES

An EA is required by NEPA to determine whether the action considered will result in a significant impact on the human environment. If the action is determined not to be significant based on an analysis of relevant considerations, the EA and resulting finding of no significant impact would be the final environmental documents required by NEPA. An environmental impact statement (EIS) need only be prepared for major federal actions significantly affecting the human environment. The following section addresses the environmental impacts of the management alternatives.

Section 4 forms the analytic basis for the issue comparisons across the alternatives. The potential of each alternative to affect one or more components of the human environment, directly and indirectly, is discussed in this section. Direct effects are caused by the action and occur at the same time and place, while indirect effects occur later in time or are further removed in distance from the direct effect (40 CFR 1508.27). The biological impacts are presented in terms of the potential impact on availability, and integrity of data used for estimating total landed catch and discards; monitoring the attainment of annual groundfish

allocations; estimating catch rates of prohibited species; and assessing stock conditions; and the precision of fleetwide total catch estimates for target and bycatch species. Impacts on threatened and endangered species, marine mammals, and seabirds are also addressed in the biological impacts section. The socio-economic impacts address the cost to industry, observers, observer contracting companies, as well as the cost to the government, and fishing communities.

4.1 Physical Impacts of the Alternatives

Physical impacts generally associated with fishery management actions result from changes to the physical structure of the benthic environment as a result of fishing practices. The proposed rulemaking pertains to a data collection program that is expected to provide reliable information needed to assess and account for total fishing mortality and to evaluate the effectiveness of management measures. Because the proposed alternatives are not expected to change fishing behavior from the existing conditions, the potential effect on the physical environment of alternatives 2 or 3 would be no different than alternative 1, the status quo alternative. The status quo alternative does not have an impact beyond what was already considered in the EIS prepared for the 2003 groundfish annual specifications and management measures.

4.2 Biological Impacts of the Alternatives

The biological impacts generally associated with fishery management actions are 1) harvest that may result in changes in the structure of the marine community; 2) entanglement/entrapment of non target organisms in active or inactive fishing gear; 3) and major shifts in abundance and composition of the marine community as a result of fishing pressure.

Availability of Data

Data collected by voluntary whiting observers are used by NMFS to estimate total landed catch and discards, monitor the attainment of annual groundfish allocations, estimate catch rates of prohibited species, and assess stock conditions. Because large at-sea processors do not land their unprocessed catch ashore there is no opportunity for the states of Washington, Oregon, or California to monitor landings. Under Alternative 1, each vessel may choose to carry the number of observers they believe meets their management needs. There is a level of uncertainty associated with the possibility of all or some of the vessels choosing not to carry an observer or choosing not to provide NMFS with landing data. If some vessels choose not to carry observers, information used for management decisions could be inadequate. Between-vessel variability is the single largest factor contributing to variance in weekly catch estimates made from data collected by observers in the whiting fishery (Kappenman 1982). Therefore, given the small number of catcher-processors, refusal of even one vessel to carry an observer may greatly affect the total catch estimates.

Given the large harvest capacity of the at-sea processing fleet relative to the annual allocations, the loss of such information could severely affect the accuracy of inseason fishery management decisions. No direct biological impacts are expected to result from the lack of on-board observers. However, if the whiting allocation is greatly exceeded or if there are substantial discards of other species that go unmeasured, the long-term biological stability and yield of whiting or incidentally caught species may be affected. Without accurate and timely information, the risk of error associated with fishery management decisions will increase.

Implementation of either Alternative 2 and 3 would benefit management by guaranteeing that timely and accurate data are available in the future, reducing the likelihood of such indirect effects. Under Alternatives 2, there is a potential for vessels to choose to carry only one observer. If vessel operators choose to carry only one observer, it would reduce the amount of data available for managing the fishery from what is currently available under Alternative 1. Under Alternative 3, all vessels would continue to carry the same numbers of observers as they are currently doing, assuring that the same amount of data is

available as is currently available under alternative 1, status quo. Maintaining the flow of information is especially important for monitoring the incidental take of overfished groundfish species as well as the incidental take of threatened and endangered chinook salmon species. Monitoring chinook salmon bycatch is required as terms and conditions of the incidental take permit under the ESA.

Data Integrity

Because data collected by whiting observers is used to monitor harvests and assess the harvested population, maintaining the integrity of the data collections becomes paramount. Poor observer performance and unfavorable sampling conditions, those that could impair the observer's ability to follow sampling protocols defined by NMFS, are factors that undermine the integrity of the data collections.

The certification process included under Alternatives 2 and 3 requires observers to have the necessary qualifications and to display competency in performing the defined sampling duties. Certification requirements encourage data integrity by insuring that observers clearly understand sampling protocols. Sampling protocols have been established to meet specific management objectives. Because there are no certification requirements under the status quo alternative (Alternative 1), NMFS does not have the authority to remove or censure observers who perform poorly. In small fleets, such as the at-sea catcher-processor and mothership sectors of the whiting fishery, a single observer's data collection (even when there are two observers on a vessel) represents a substantial portion of the data available to manage the fishery. Poor quality data may therefore have a strong influence on fleetwide estimates of total catch by species. Although this is not a wide-scale problem, in 1996 the NPGOP was unable to censure 2 whiting observers who failed to adequately perform their defined sampling duties. To maintain the integrity of data collections NMFS must have the authority to manage observer performance.

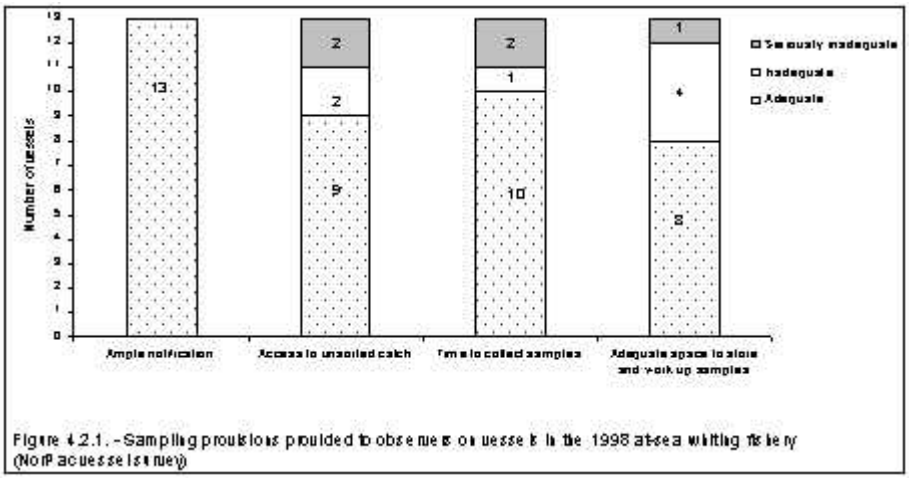


Figure 4.2.1.- Sampling provisions provided to observers on vessels in the 1998 at-sea whiting fishery (NorPac vessel survey)

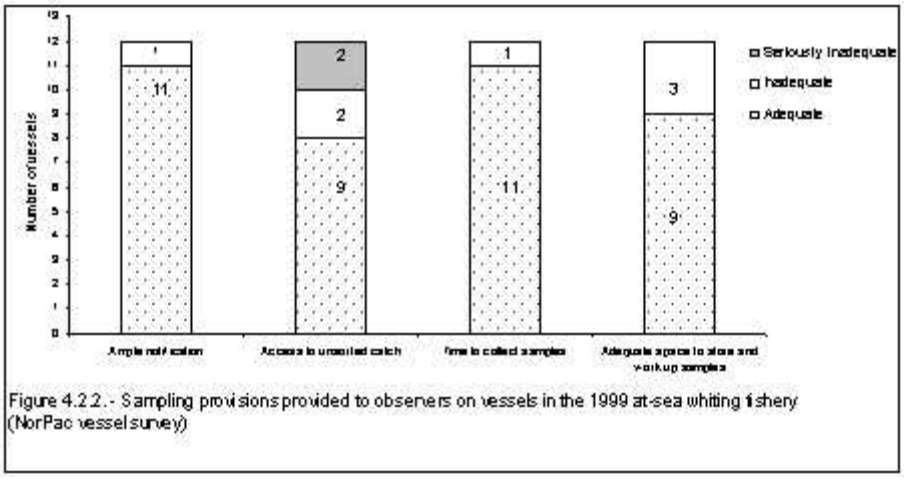


Figure 4.2.2.- Sampling provisions provided to observers on vessels in the 1999 at-sea whiting fishery (NorPac vessel survey)

Data integrity is also dependent on the observer's ability to effectively executed their duties in a manner that is consistent with the defined sampling protocols. This requires that the vessels provide certain basic necessities including: 1) ample notification of when fish are being brought aboard, 2) access to unsorted catch, 3) sufficient time to collect a sample, and 4) space in which to

store and work up samples. A summary of provisions provided to observers during the 1998 whiting fishery are shown below in Figure 4.2.1. This examination found that observers aboard two vessels repeatedly had serious difficulties accessing unsorted catch, while the observers aboard two other vessels had moderate difficulties; observers aboard three vessels indicated that rapid processing of hauls, especially small hauls limited their ability to collect adequately sized samples; sample stations aboard five vessels did not allow the observers to store more than 300 kg (6 baskets) of fish in sample baskets with one area being so small that the observer could not store more than 100 kg (2 baskets) of sample fish.

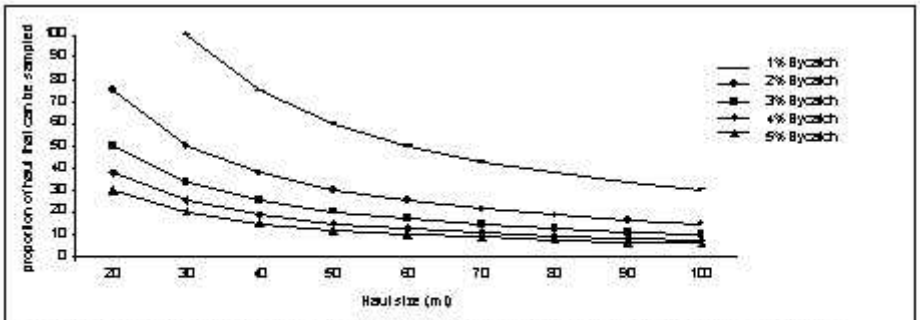


Figure 4.2.3 - Proportion of an individual haul that can be partial haul sampled with 300 kg of storage space and bycatch comprising 1% to 5% of total catch weight (NorPac)

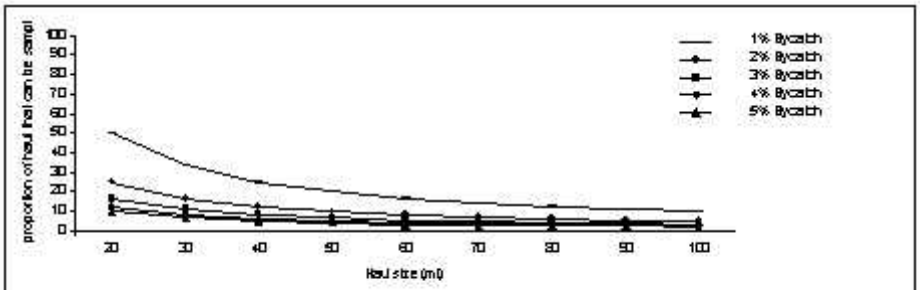


Figure 4.2.4 - Proportion of an individual haul that can be partial haul sampled with 100 kg of storage space and bycatch comprising 1% to 5% of total catch weight (NorPac)

In 1999, all of the whiting vessels had, NMFS-certified sample stations as required for participation in the Bering Sea restricted access fisheries. Even though every vessel had adequate sample stations, observers on 3 vessels indicated that operational issues impaired their ability to used these stations (Figure 4.2.2). Sample station provisions being defined through this rulemaking under Alternatives 2 and 3 are consistent with the NMFS-certified sample station requirements in the Alaska groundfish fishery.

Adequate sample space is a concern because partial haul sampling, where bycatch species from a known fraction of an individual haul are sorted, counted and/or weighed, is the most common sample method used by whiting observers. Inadequate storage space (less than 300 kg) has the potential to limit the size of partial haul samples. When a particular species makes up a small portion of the total catch, the precision of total catch estimates for that species are influenced by the distribution of that species within the haul and the fraction of the haul that was sampled. A Bering Sea pollock fishery simulation model used to estimate with-in haul variance at different sample fractions found that rapid increases in variance occurred as the fraction of the haul sampled decreased below 20% (Karp & Turnock 1997). If it is assumed that an observer sorts all bycatch before counting and weighting their sample, a sample station with the capacity of 300 kg would permit an observer to monitor 60% of a 50 mt haul if the bycatch made up 1% of the total catch by weight and 30% of the haul if the bycatch made up 2% of the total catch by weight (Figure 4.2.3). In contrast, a sample station with the capacity of 100 kg would only allow an observer to monitor 20% of a 50 mt haul if the bycatch made up 1% of the total catch by weight and 13% of the haul if the bycatch made up 2% of the total catch by weight (Figure 4.2.4). Under Alternative 1 (Status Quo), vessels with inadequate space for sampling have no requirement to provide additional space. In contrast, Alternatives 2 and 3 would establish a minimum sample area of 4.5 sq m (approximately 48 sq ft) including the observers' 0.6 m by 1.2

m (approximately 2 ft by 4 ft) sample table, this is consistent with the requirements for vessels participating in the CDQ groundfish fisheries off Alaska.

An examination of observer data from 1998 and 2000 shows that the fraction of each haul that was sampled varied considerably between vessels (Table 4.2.1 and Table 4.2.2). Of 1,146 hauls observed in the catcher-processor fleet in 1998, 56 percent of the sample weights were less than 10 percent of the haul weight, and 35 percent of the samples were more than 20 percent of the haul weight. Although there were many small samples most all were taken using the defined random sampling protocols. Of the 472 hauls observed in the mothership processor fleet in 1998, 41 percent of the sample weights were less than 10 percent of the haul weight, and 48 percent of the samples were more than 20 percent of the haul weight. In contrast to the catcher-processors, few of these samples were taken using the random sample protocols defined by NPGOP. Of the 777 hauls take by the tribal processor, only 2 percent of the sample weights were less than 20 percent of the haul weight. Observers on the tribal vessel were able to employ the random sampling protocols.

Table 4.2.1 Proportion of observed and unobserved hauls by vessel and with-in haul sample fractions for 1998 at-sea whiting (NorPac)

Vessel Type	Percentage of hauls by with-in haul sample fraction						Percentage of all hauls sampled	Estimate of total salmon[1]
	0-.10	.11-.20	.21-.40	.41-.60	.61-.80	.80-1.00		
CP 1	9	14	45	23	3	6	96	73
CP 2	92	2	1	0	0	5	98	19
CP 3	99	1	0	0	0	0	98	222
CP 4	2	0	3	26	56	13	96	27
CP 5	81	16	1	0	1	0	99	58
CP 6	3	29	61	6	0	2	97	44
CP 7	8	17	66	10	0	0	96	73
All CP	56	9	19	7	6	3	97	515
MP 1	4	19	46	31	0	1	56	93
MP 2	19	39	35	6	0	0	48	88
MP 3	2	3	64	26	4	0	47	356
MP 4	14	17	38	24	5	3	46	461
MP 5	100	0	0	0	0	0	41	0
MP 6	100	0	0	0	0	0	36	0
All MP	41	11	31	15	1	1	45	1044
TP 1	1	1	58	27	4	10	98	2107

[1] total salmon estimates are a simple estimate based on aggregated observer sample data

Of 1,124 hauls observed in the catcher-processor fleet in 2000, 24 percent of the sample weights were less than 10 percent of the haul weight, and 74 percent of the samples were more than 20 percent of the haul weight. Although there were many small samples most all were taken using the defined random

sampling protocols. Of the 846 hauls observed in the mothership processor fleet in 2000, 21 percent of the sample weights were less than 10 percent of the haul weight, and 67 percent of the samples were more than 20 percent of the haul weight. With the addition of a second observer on most motherships in 2000 most of these samples were taken using the random sample protocols defined by North Pacific Groundfish Observer program (NPGOP), thereby insuring the integrity of the data. Of the 214 hauls taken the tribal processor, 56 percent of the sample weights were less than 20 percent of the haul weight.

Table 4.2.2 Proportion of observed and unobserved hauls by vessel and with-in haul sample fractions for 2000 at-sea whiting (NorPac)

Vessel Type	Percentage of hauls by with-in haul sample fraction						Percentage of all hauls sampled	Estimate of total salmon[1]
	0-.10	.11-.20	.21-.40	.41-.60	.61-.80	.80-1.00		
CP 1	0	0	83	1	0	16	97	265
CP 2	95	3	1	0	0	0	98	11
CP 3	4	9	78	6	1	3	94	365
CP 4	1	2	68	19	2	9	96	561
CP 5	0	0	17	12	0	71	96	372
CP 6	0	0	30	39	12	17	94	45
CP 7	0	0	6	76	4	14	96	72
CP 8	0	1	15	38	16	31	95	148
All CP	24	3	36	23	4	11	96	1839
MP 1	0	0	28	65	4	3	52	260
MP 2	0	4	80	10	1	5	100	385
MP 3	3	30	35	1	0	31	100	1665
MP 4	5	13	59	8	3	13	75	555
MP 5	96	0	2	0	0	3	57	921
MP 6	2	11	61	12	2	14	99	634
All MP	21	12	42	10	1	14	78	4420
TP 1	19	37	2	0	0	4	100	1947

[1] total salmon estimates are a simple estimate based on aggregated observer sample data

Observer sample selection occurs at three levels: the vessel, the hauls, and the fraction of the individual haul that is sampled. The NPGOP defines random sampling protocols that observers use for selecting the haul and the proportion of the haul that is to be sampled. The protocols and sampling priorities provided to whiting observers are consistent with WOC management objectives. In 1998, observers on 3 of the 5 non-tribal mothership vessels (the tribal mothership carried two observers) were unable to consistently use the random numbers table to select which hauls to sample and none of them were able to use a sample frame to randomly select the portion of the individual haul that was to be sampled. In 1999 and 2000, two vessels had operational issues that affected the observer's' ability to follow random sampling protocols. The

large number of hauls taken daily and time and space constraints were given as the primary reasons that mothership observers were unable to employ the prescribed random selection methods. An additional observer on board each mothership processor as seen since 2000 and 2001 helped to address these sampling problems (Alternative 3).

Using substandard or inadequate data resulting from inadequate sampling provisions is likely to impair the ability to manage the fishery resources and increase the risk of error associated with inseason fishery management decisions. Under Alternative 1, there are no provisions which would require a vessel to provide conditions necessary for an observer to carry out their duties in a manner that is consistent with the defined sampling protocols. Under Alternatives 2 and 3 vessels would be required to provide observers with basic sampling provisions. If it were determined that the data collected by voluntary observers were not collected according to NMFS protocols or were otherwise inadequate or substandard, fishery managers would be required to give first consideration to the resource thereby making conservative decisions to compensate for the lack of adequate biological and harvest data. Overall, Alternative 3 could be expected to result in the greatest long-term data quality, followed by Alternative 2.

Precision of Fleetwide Catch Estimates

Species composition sampling is used to estimate of the proportion of each species in the haul. Observers record an estimate of total weight of each haul while they are aboard a vessel. Although observers were onboard virtually 100% of the days that the at-sea whiting fleet processed fish, the fraction of all hauls that are sampled can vary considerably between the processing sectors (Table 4.2.1 and Table 4.2.2). In 1998, approximately 97% of the total hauls taken by catcher-processors were sampled while only 45% of the hauls taken by non-tribal motherships were sampled. This difference was mostly because the catcher-processors voluntarily carried two observers during 1998 to provide additional data for monitoring their voluntary quota share program. In contrast, the non-tribal mothership fishery, a fast paced derby style fishery, carried only one observer in 1998. In 2000, approximately 96% of the total hauls taken by catcher-processors were sampled while 78% of the hauls taken by non-tribal motherships were sampled (Table 4.2.2). The precision in total catch estimates is most affected if less than 100% of the vessels carry an observer, as would be possible under Alternative 1. Observer coverage of at least two observers (Alternative 3) increases the number of hauls observed, and is likely to improve information used for quota management and data on incidental species bycatch.

The precision of fleetwide total catch estimates for a particular species is influenced by the distribution of that species within the haul and the fraction of the individual haul that is sampled, as well as by the fraction of all hauls that are sampled and the distribution of a species between those hauls. Because between-haul and within-haul frequency and distribution can vary considerably for each bycatch species, the ideal subsample size and the proportion of sampled hauls needed to estimate total catch, with a reasonable degree of confidence, varies between species. An analysis of observer based chinook salmon catch composition and total catch estimates for the Alaska pollock fishery found that substantial improvements in the precision of total catch estimates for chinook salmon were seen when all or nearly all hauls were sampled (Volstad 1997), as would occur in the long-term under Alternative 3. Given the smaller proportion of sampled hauls in the non-tribal mothership fleet the total catch estimates for infrequently occurring species are likely to be less precise than those used for the catcher-processor and tribal mothership. Volstad et al. found that the difference between vessels had more of an influence on the precision of estimates than did the between haul differences on a single vessel.

Salmonids

The action is to implement a data collection program to monitor the monitor activities that have been established by regulation and the annual specification and management measures. Therefore, none of the management alternatives is expected to have an adverse effect on the incidental mortality levels of listed salmon species. It is reasonable to expect that no additional information on endangered species bycatch

will be provided under Alternative 1. Under Alternative 1 there is no guarantee that data will be available in the future. Alternatives 2 and 3 would maintain the availability of data into the future. Alternative 3, provides for the availability of additional data (more hauls sampled) that is likely to reduce the error in estimates of ESA listed species. In the long-term Alternatives 2 or 3 are expected to guaranteeing that management data is availability in the future.

Marine Mammals

The action is to implement a data collection program to monitor the monitor activities that have been established by regulation and the annual specification and management measures. Therefore, none of the proposed management alternatives are likely to affect the incidental mortality levels of marine mammals. The WOC groundfish fisheries are considered a category III fisheries where the annual mortality and serious injury of a stock by the fishery is less than or equal to 1 percent of the PBR level. Under Alternative 1, it is likely that information regarding the incidental take of marine mammals in the groundfish fishery will continue to be available. However, implementation of Alternatives 2 or 3 guarantee the availability of these data into the future.

Seabirds

The action is to implement a data collection program to monitor the monitor activities that have been established by regulation and the annual specification and management measures. Therefore, none of the proposed management alternatives are likely to affect the incidental mortality levels of seabirds. Under Alternative 1, it is likely that information regarding the incidental take of seabirds in the whiting fishery will continue to be available. However, implementation of Alternatives 2 or 3 will guarantee the availability of these data into the future.

Sea Turtles

The action is to implement a data collection program to monitor the monitor activities that have been established by regulation and the annual specification and management measures. Therefore, none of the proposed management alternatives are likely to affect the incidental mortality levels of sea turtles. Under Alternative 1, it is likely that information regarding the incidental take of sea turtles in the whiting fishery will continue to be available. However, implementation of Alternatives 2 or 3 will guarantee the availability of these data into the future.

Endangered Species

Specific discussion of species listed under the ESA can be found above in the sections titled salmonids, marine mammals, sea birds and sea turtles.

4.3 Socio-economic Impacts of the Alternatives

This section provides information about economic and socio-economic impacts of the management alternatives including identification of the individuals or groups that may be affected by the action, the nature of these impacts, quantification of the economic impacts if possible, and discussion of the tradeoffs between qualitative and quantitative benefits and costs.

Cost to Industry

Under Alternative 1, observer coverage would continue on a voluntary basis and allow vessel operators to choose the number of observers and the fraction of the cruise they want the observer on board. No additional costs to industry are expected from management alternative 1. Alternatives 2 and 3 would implement mandatory coverage requirements for processing vessels greater than 125 ft. Under Alternative 2, each vessel would be required to carry one observer, with the option for carrying additional observers voluntarily. Because both motherships and catcher-processor vessels currently carry two observers on a voluntary basis this alternative is not expected to place an additional burden on the fleet over what is already being incurred. Coverage requirements under Alternative 3 would require each vessel to carry two observers, with the option of voluntarily carrying additional observers. The mandatory requirement to carry

two observers is not expected to create an additional burden on the fleet because each vessel already carries two observers.

The costs of carrying an observer during whiting is about $300 per day (Pers. Comm. Dale Meyer). On average in 2001, each vessel fished for 31 days (ranging from 9-118 days). At $300 per day, the average cost to the vessel for each observer was $9,300 (ranging from $3,950 -$36,650) during the 2001 whiting season. In addition, training and debriefing costs would have been approximately $1,250 per observer. Applying $0.035 per pound (the average ex-vessel value of whiting to the Oregon shore-based fishery in July in 2001) to the average round weight of whiting processed per vessel in the 2001 (7,705 mt) the cost of one observer would be on the order of 1.6 % of the ex-vessel value of the whiting harvest (Alternative 2), and would be double, 3.1 % of the ex-vessel value of the whiting harvest if the vessel carried two observers (Alternative 3 and as is currently done under the status quo alternative.

All of the catcher-processors and motherships in the at-sea whiting fleet have participated in the federal groundfish fishery off Alaska where they are required by regulation to provide the basic amenities necessary for an observer to conduct their required duties. Under Alternative 1, there would be no specific provisions that would allow an observer to carry out their duties in a safe and effective manner. Under Alternatives 2 and 3 the vessel responsibilities and prohibitions would be consistent with observer regulations that apply to these vessels when they are participating in the groundfish fishery off Alaska. For whiting vessels that also participate in the Alaska groundfish fishery, maintaining these provisions while participating in the whiting fishery would be a minimal burden on the vessels, providing they are currently in compliance with the Alaska regulations.

Alternatives 2 and 3 define sample station and operational requirements for vessels carrying observers. These requirements are consistent with the restricted access regulations for processing vessels in the Bering Sea management area (50 CFR 679.28(d)). When participating in the restricted access fisheries in Alaska, these vessels are required to provide NMFS-approved scales for the observer sample stations. Because the requirements defined for Alternatives 2 and 3 are consistent with sample station requirements for certified sample stations in the federal groundfish fishery off Alaska, the sample station requirements defined for the WOC are not expected to place any additional burden on vessels that are certified to participate in the Alaska restricted access groundfish fisheries. All of the vessels that participated in the whiting fishery in 2001 had NMFS-certified sample stations as specified for the Alaska restricted access fisheries. Any vessel that enters into the whiting fishery in the future that does not also fish in the Alaska restricted access fisheries, may be required to incur greater costs to be in compliance with the sample station requirements. The cost of installing a station varies greatly between vessels do to factory layout and existing sampling facilities. Therefore, it is not possible to provide an accurate estimate for vessel that may enter the fishery in the future. The burden on vessels to meet sample station standards defined under Alternatives 2 or 3 is unique to the vessels and is therefore unknown.

All processing vessels participating in the at-sea whiting fishery must comply with general U.S. Coast Guard regulations at 46 CFR Chapter I, pertaining to the safe operation of a vessel. While these same vessels fish in the Alaska groundfish fishery, they are required to meet observer health and safety standards at 50 CFR 600.725, 600.746, and 679.50. Under Alternative 1, there are no provisions requiring whiting vessels to provide safe and adequate working conditions for the non-certified observers. Whiting processors already provide the necessary equipment to meet health and safety standards while participating in the federal groundfish fishery off Alaska. While fishing for whiting under Alternative 1, they have generally followed the same standards. Because these processing vessels generally meet the standards under Alternative 1, Alternatives 2 and 3 are not expected to create an additional burden on the vessels.

Cost to the Observers

Qualified individuals who maintain a high degree of professionalism while providing quality data are needed to maintain the integrity of observer data collections. When these same individuals participate in the

federal groundfish fisheries off Alaska where there are specific regulations defining their responsibilities, prohibited behaviors, and actions that will be taken by NMFS if they are found to have violated program policies or performed poorly. Requiring observers to adhere to the same standards as they are required to follow when they are deployed in Alaska (Alternatives 2 and 3) would not create a considerable burden on the observers. The annual cost burden on whiting observers is expected to be $120 dollars under Alternative 2 ($5/observer) or $240 under Alternative 3 (8$/observer). These costs are detailed in Appendix A of this document. These are costs relating to the time required to prepare and submit documentary evidence and petitions. This is expected to affect at a maximum, 5% of the WOC observers per year. There is no cost under status quo.

Because of the lack of regulatory or contractual guidelines for observer providers relating to timely pay, insurance coverage, or logistical and at-sea support services observers may be vulnerable to abuse. In addition, when a vessel owner negotiates directly with contracting companies for observer services, there are concerns that business interests could fail to ensure that observers are treated in a fair and equitable manner. Although none of the proposed alternatives eliminate these concerns, Alternatives 2 and 3, would bring more structure to the provider-observer relationship. To date (under Alternative 1), no serious concerns with providers, specific to WOC observers, have been identified, however this may not always be the case.

In 1996 when the Magnuson-Stevens Act was amended the safety, health and well-being of observers stationed aboard fishing vessels participating in mandatory and voluntary observer programs was a high priority. The Magnuson-Stevens Act directed the secretary to promulgate regulations which define unsafe conditions that would jeopardize an observer's health or safety, and define actions that vessel owners or operators would be required to take to make their vessel adequate and safe for an observer to carry out their normal functions. It is unclear how observer health and safety standards (50 CFR 600.725 and 600.746) apply to observers in the whiting fishery. Although there have been no serious safety issues to date, Alternatives 2 and 3 would benefit observers by requiring safety provisions and reducing the risk of unsafe conditions for whiting observers in the future. In general, processing vessels participating in the whiting fishery under Alternative 1 behave similarly to Alaskan processing vessels that are following the general observer regulations for the Alaska groundfish fishery (50 CFR 679.5). Therefore, Alternatives 2 and 3 are not expected to create an additional burden on these vessels.

Costs to Providers

Alternatives 2 and 3 contain regulatory requirements that specifying the duties and responsibilities of companies who provide support services for whiting observers, and requirements pertaining to provider certification and performance standards. To date, contracting companies for the WOC whiting fishery have followed the hiring, evaluating, and recruiting regulations that apply to the Alaskan fisheries and have hired individuals who have met the minimum qualifications. Without regulations or a contractual arrangement defining observer provider certification requirements, responsibilities, deployment conditions, standards of conduct, conflict of interest standards and procedures for disciplinary action, NMFS is limited in its ability to oversee the actions of observer provider companies. Although no significant problems have been identified with observer providers, that are specific only to the WOC, potential damages to both observers and data integrity do exist.

Under Alternatives 2 and 3 certified observer providers would be required to submit information that would be used to: (1) Coordinate and conduct effective and efficient scheduling of observers for training, briefing , and debriefing sessions; (2) maintain an observer deployment database; and (3) monitor the ongoing ability of a company to meet the requirements of a certified observer provider. This information would include:

(A) A list of prospective observers to be hired upon approval by the Regional Director and observer training/briefing registration;

(B) Projected observer assignment
(C) Observer deployment/logistics reports
(D) Observer debriefing registration
(E) Certificate of insurance that verifies compliance with the insurance coverage
(F) Observer's physical examination notice -indicating that they passed exam within the past 12 months
(G) Copy of each type of signed an valid contract with observers
(H) Reports of observer harassment, concerns about vessel or processor safety, or observer performance problems submitted to the NPGOP office.

These materials have been submitted voluntarily by observer providers for the past several years. Although costs to observers providers are difficult to estimate accurately, the estimated annual cost of this information for all providers combined is $1688 ($422 annually/observer provider) for Alternative 2 and $2008 ($502 annually/ observer provider) for Alternative 3 (Appendix A). Under Alternative 1, providers voluntarily provide $1116 ($279 annually/observer provider) of costs expected under Alternatives 2 and 3. These costs are detailed in Appendix A of this document. The cost of the new information collected would be borne by the observer provider and could increase the cost per observer deployment day.

Mandatory insurance coverage for observers is not expected to create an additional burden, other than the cost of submitting the certificate of insurance which was noted in the previous paragraph. This is because all providers currently carry the same coverages for all observers (at the level required for Alaska) regardless of where the vessels are operating.

Because a vessel may choose not to carry an observer under Alternative 1, mandatory coverage provisions under Alternatives 2 and 3 are expected to benefit the providers by insuring that each vessel continues to carry at least one observer in the future, yet does not restrict vessels from carrying additional observers voluntarily. If Alternatives 3 were selected, each vessel would be required to carry two observers. Under Alternative 1, approximately 30 observers are deployed annually as compared to 24 estimated under Alternative 1 and 30 under Alternative 3.

Costs to the Government

Data Integrity: the lack of regulations defining disciplinary actions such as probation, suspension or decertification has prevented the NPGOP from removing or disciplining individuals who do not abide by program policies and performance standards. Although this is not a wide-scale problem, in 1996 the NPGOP was unable to censure 2 whiting observers who failed to adequately perform their defined sampling duties, because there were no regulations defining procedures for probation, suspension, or decertification. Because each of the at-sea processing sectors are comprised of relatively small groups of vessels, a single observer's data collection represents are large portion of the data available to manage the fishery. Using substandard or inadequate data would impair NMFS's ability to effectively manage the fishery resources and would increase the risk of error associated with inseason fishery management decisions.

Administration and Enforcement: if conditions remain unchanged, no additional administrative, or enforcement information costs would be borne by NMFS. However, if any or all the vessels should choose not to carry an observer, or choose not to provide NMFS with landing data the information base from which the fishery is managed would be lacking. Without accurate and timely information, the risk of error associated with fishery management decisions will increase. Developing new methods for estimating and monitoring harvest mortality in the at-sea processing sector would place additional demands on management and enforcement, at a time when resources are limited. Because NMFS has no authority to regulate either observer or observer provider performance or to resolve conditions that undermine data quality existing deficiencies would be difficult to eliminate. Implementation of Alternatives 2 or 3 would benefit the agency by lifting the restrictions on use of whiting observer data in civil enforcement or criminal proceedings under the Magnsuon-Stevens Act. Regulations at 15 CFR 905 preclude NMFS from using information collected by voluntarily carried observers for enforcing regulations under the Magnuson-Stevens Act, Marine Mammal Protection Act, or Endangered Species Act. Without mandatory observer coverage requirements, NMFS ability to address serious violations of fishery regulations is hindered.

Section 402. (c) of the Magnuson-Stevens Act restricts the use of information collected by voluntary fishery data collectors. This section reads as follows:

> *A(1) The Secretary shall promulgate regulations to restrict the use, in civil enforcement or criminal proceedings under this Act, the Marine Mammal Protection Act of 1972 (16 USC 1361 et seq.), and the Endangered Species Act (16 USC 1531 et seq.), of information collected by voluntary fishery data collectors, including sea samplers, while aboard any vessel for conservation and management purposes if the presence of such a fishery data collector aboard is not required by any such Acts or regulations thereunder*.

Fishing Communities

Pacific coast groundfish contributes to the economies and shape the cultures of numerous fishing communities in Washington, Oregon, and California. The Magnuson-Stevens Act requires that actions taken to implement FMPs be consistent with 10 national standards, one of which requires that conservation and management measures ``take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities.''

In general, managing a fishery without accurate and timely total catch data poses a great risks to the economic stability of the fishery. Reliable information on discarded catch is needed to assess and account for total fishing mortality, if discard estimates are too low, then harvest allocations may be set too high, and the long-term health of the stock may be jeopardized. By adopting regulations to support an on board observer program in the long-term impact on communities is expected to be positive because it would reduce the likelihood of overfishing by providing credible information for monitoring stock abundance and potential yield.

4.4 Summary of Impacts

Biological Impacts

Under Alternative 1, it is likely that similar coverage levels would be seen in the future, however the voluntary nature of the coverage does not guarantee this. At any point, all or some of the vessels may choose not to carry an observer, or choose not to provide NMFS with landing data. If this were to occur, information used for management decisions would be inadequate. Given the small number of processing vessels in each sector, refusal on one vessel to carry an observer may greatly affect the total catch estimates. Without accurate and timely information, the risk of error associated with fishery management decisions will increase and the ESA terms and conditions for incidental take of chinook salmon would not be met. Alternative 2 would require whiting processing vessels to carry one observer at all times, and Alternative 3 would require at-sea processing vessels equal to or greater than 125 ft (38.1 m) in length to carry two NMFS-certified observers while participating in the groundfish fishery and vessels less than 125 ft (38.1 m) in length would be required to carry one observer. Under either Alternative 2 or 3, additional NMFS-certified observers could be voluntarily carried, as is currently done. Under Alternative 2, there is a potential for vessels to choose to only carry one observer and reduce the amount of data available for managing the fishery. However, implementation of either Alternative 2 or 3 would guarantee a minimum level of coverage and thereby the availability of observer data for future decision making and harvest management. Maintaining the flow of observer data at current levels or greater would reduce the likelihood of whiting allocations being greatly exceeded or substantial underestimates of discard species, both of which could affect the long-term biological stability and yield of whiting or bycatch species. Increasing observer coverage on motherships to at least two observers, as required under Alternative 3, would increase the number of hauls observed, and potentially improve the quality of information by reducing the influence of between-haul variability on total catch estimates for whiting and bycatch species.

To maintain the integrity of data collections, NMFS must have the authority to manage observer performance and require vessels to provide the basic conditions that allow an observer to carry out their required duties. Alternative 1 contains no provisions to improve or maintain data integrity. Alternatives 2 and 3 would implement performance requirements for observers and give NMFS the authority to certify, suspend, and decertify observers who performed poorly. Under Alternative 1 sampling conditions are likely

to remain unchanged or diminish. Alternative 2 and 3 would also establish vessel standards which would define conditions which would allow observers to effectively carry out their duties and thereby maintain data integrity. Using substandard or inadequate data would impair the ability to manage the fishery resources and increase the risk of error associated with inseason fishery management decisions. If it were determined that the data collected by voluntary observers were not collected according to NMFS protocols or was otherwise inadequate or substandard, fishery managers would be required to give first consideration to the resource thereby making conservative decisions to compensate for the lack of adequate biological and harvest data.

Socio-economic

By defining mandatory coverage levels, vessel responsibilities, prohibited actions; and operational and physical requirements for sample stations, the burden on industry will be increased over Alternative 1. Alternatives 2 and 3 would implement mandatory coverage requirements. Alternative 2 requires all at-sea processors to carry one observer and Alternative 3 would require at-sea processing vessels equal to or greater than 125 ft (38.1 m) in length to carry two NMFS-certified observers while participating in the groundfish fishery and vessels less than 125 ft (38.1 m) in length would be required to carry one observer (to date there have been no processors under 125 ft). Under either of the Alternatives vessels may voluntarily carrying more observers if they choose. Because vessels currently carry two observers on a voluntary basis, the coverage requirements under Alternatives 2 or 3 are not expected to place an additional burden on either fleet over what is already being incurred under a voluntary program.

Under Alternatives 2 and 3, the defined vessel responsibilities and prohibited actions are consistent with those that apply to the groundfish fishery off Alaska. Because each of the whiting vessels also participates in the groundfish fishery off Alaska, maintaining these provisions while participating in the whiting fishery would not create a significant burden on a vessel that is in compliance with the Alaska regulations. Alternative 2 and 3 also define sample station and operational requirements, that are consistent with the requirements for the Alaska restricted access fisheries for catcher/processors and mothership processors. All of the processing vessels that participated in the 2001 whiting fishery have Alaska certified observer sample stations, therefore the WOC requirements are not expected to place an additional burden on these vessels.

Requiring observers to adhere to the same standards as they are required to follow when they are deployed in Alaska (Alternatives 2 and 3) would create only a small burden on the observers. The annual cost burden on whiting observers is expected to be $120 (5$/observer) for Alternative 2 or $240 for Alternatives 1 or 3 (see Appendix A). These are from the costs related to the appeals process for certification, suspension and decertification, which are only expected to affect 5% of the WOC observers per year.

Under Alternative 1, the industry pays private companies directly for observer coverage. Day-to-day competition between these private companies may leave observers vulnerable and give rise to poor work conditions which may have an affect on observer morale. Alternatives 2 and 3 contain regulatory requirements that specifying the duties and responsibilities of observer contracting companies who provide support services for whiting observers, there are also requirements pertaining to observer provider certification and performance standards for the WOC. Without regulations or contractual agreements defining observer provider certification requirements, responsibilities, deployment conditions, standards of conduct, conflict of interest standards and procedures for suspension and decertification, NMFS is limited in its ability to oversee the actions of contracting companies. Although no significant observer provider problems have been identified that are specific only to the WOC, potential damages to both observers and the data integrity do exist. Under Alternatives 2 and 3 certified observer providers would be required to submit information to the NPGOP that would be used to: (1) Coordinate and conduct effective and efficient scheduling of observers for training, briefing , and debriefing sessions; (2) maintain an observer deployment database; and (3) monitor the ongoing ability of a company to meet the requirements of a certified observer provider. These materials have been submitted voluntarily by observer providers for the past several years. The estimated annual cost of this information for all providers combined is $1688 for Alternative 2 and $2008 for Alternative 3 (see Appendix A). Under Alternative 1, providers voluntarily provide $1116 of costs expected under Alternatives 2 and 3. Although observer provider costs have been estimated for this analysis, it must be noted that the lack of economic data make observer provider costs difficult to estimate accurately. The cost of the new information collected would be borne by the observer provider however, the expected benefits to the observer provider from mandatory observer coverage requirements under Alternatives 2 and 3 are expected to exceed the additional costs.

Adopting observer provider certification and decertification regulations similar to those used in the Alaska groundfish fishery (Alternatives 2 or 3) would provide more structure to the relationship between NMFS and these private observer contracting companies. However, experience in Alaska has found that observers are quite vulnerable without a direct contractual relationship between the government and the observer companies (MRAG 2000).

Because NMFS has no authority to regulate either observer or observer provider performance or to

resolve conditions that undermine data quality deficiencies would be difficult to eliminate. Although this is not a wide-scale problem, using substandard or inadequate data is costly to the agency because impairs the ability to manage the fishery resources and increase the risk of error associated with inseason fishery management decisions. Similarly, the information base from which the fishery is managed would be lacking if all or some of the vessels should choose not to carry an observer, or choose not to provide NMFS with landing data. Under Alternative 1, the risk of losing all or a portion of data used for management decisions is high. Developing new methods for estimating and monitoring harvest mortality in the at-sea processing sector would be costly to NMFS and place additional demands on management and enforcement, at a time when resources are limited.

Under Alternative 1, there are no provisions requiring whiting vessels to provide safe and adequate working conditions specifically for observers. It is unclear how Magnuson-Stevens Act regulations (50 CFR part 600) which provide observer health and safety standards apply to the current whiting observers. Because all of the processing vessels in the at-sea whiting fishery must comply with general U.S. Coast Guard safety regulation, no additional burden is expected under either Alternatives 2 or 3, because the processing vessels follow Coast Guard regulations at 46 CFR Chapter I, pertaining to the safe operation of a vessel and are required to meet the observer health and safety standards at 50 CFR 600.725, 600.746, and 679.50 while carrying observers in Alaska.

The Council's April 1999 recommendation was to require each processing vessel to carry one observer (Alternative 2), However NMFS preferred option Alternative 3, would require processing vessels equal to or greater than 125 ft (38.1 m) in length to carry two NMFS-certified observers while participating in the groundfish fishery and vessels less than 125 ft (38.1 m) in length would be required to carry one observer. Since 2001, under the status quo alternative (alternative 1) all processors have carried two observers and all processing vessels proposed to carry two observers. To date, no at-sea processors under 125 ft or less have participated in the fishery.

4.5 NMFS Preferred Alternative

The current operational structure of the observer program would continue as described as it is under the status quo alternative. NMFS would continue to administer the program; vessels would continue to voluntarily carry NMFS-trained observers; businesses that are certified as observer providers for the federal groundfish fishery off Alaska would continue to provide observer services; and individual processing vessels would continue to pay the direct costs associated with carrying the observers. In essences, this rule would codify in federal regulation, the already existing program.

Under this proposed rule, at-sea processing vessels will be required to obtain their observers from third-party observer provider companies that are subject to the Alaskan regulations at 50 CFR 679.50. These are comprehensive regulations that provide for permitting and permit sanctions against the observer provider companies. There is no need to duplicate these provisions in the WOC regulations, as the observer provider companies will be regulated under the Alaska regulations by the NMFS Alaska Region. Therefore, the proposed action refers to the Alaskan requirements for observer providers, but does not repeat them in the WOC regulations.

All at-sea processing vessels greater then 125 feet in length would be required to carry two observer whenever they fish (100% observer coverage), and one observer for each vessel 125 feet or less. Additional NMFS-certified observers could be carried voluntarily, providing observers were available. With the exception of the mandatory coverage requirements, all other provisions under this rule would apply to any NMFS-certified observers carried by a vessel.

Under this alternative, certification requirements for observers would be defined and include: observer qualifications, terms of certification, responsibilities, and standards of conduct. In addition, procedures or actions that NMFS may take to revoke or suspend the certification of individuals who are found to have violated program policies or unsatisfactorily performed the duties of an observer would be defined. The suspension and decertification process, would allow observers the opportunity to submit documentary evidence or petitions prior to a final determination.

Under this alternative vessels would be required to provide observers with basic amenities. The observer's ability to accomplish their duties requires that the vessel provide: 1) notification of fish being

brought aboard, 2) access to unsorted catch, 3) sufficient time to collect a sample, and 4) adequate space in which to collect and work up samples. Where appropriate, existing regulation (50 CFR 660.360 & 660.302) described under alternative 1 and found in Appendix B, would apply to all observers carried on board at-sea processing vessels. In addition, regulations would be developed that are specific to at-sea processing vessels requirements for: accommodations, communications equipment, at-sea transfers, sample space, sampling stations, work tables, diverter boards, and sample. Because all at-sea processing vessels operating in the WOC whiting fishery also participate in the federal groundfish fisheries off Alaska where they must adhere to the Alaska observer regulations, proposed observer regulations for the WOC, would duplicate the Alaska regulations as much as practicable, recognizing differences in Pacific coast groundfish fisheries management strategies and objectives, and use of observer data.

4.6 Cumulative Impacts

Cumulative effects must be considered when evaluating the alternatives to the issues considered in the EA. Cumulative impacts are those combined effects on quality of human environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what federal or non-federal agency undertake such actions (40 CFR 1508.7, 1508.25 (a), and 1508.25 (c)).

In assess the cumulative impacts it is necessary to define the area that would be affected by actions. Section 3 of this document contains a detailed description of the geographic area in which the fishery occurs (3 to 200 miles off shore and north of 42° North Lat.), the biological resources including target and incidentally caught species, and the socio-economic environment. Potential direct and indirect effects of the alternative actions are presented in section 4 of this document. Table 4.6.1 defines the past, proposed and foreseeable future actions that are expected to affect these same waters and fishers as a result of the NMFS preferred alternative. The impacts of these past, proposed and foreseeable future actions from the proposed alternative are presented in Table 4.6.2.

In summary, the overall the impact of implementing the NMFS preferred alternative can be expected if the individual impacts are allowed to accumulate over time. Because each processing vessels currently carries two observers on a voluntarily basis (status quo), implementation of this action is not expected to have a substantial effect on the physical, biological or socio-economic environment over what already occurred. However, the concern that under status quo, vessels may choose not to carry observers or provide data to NMFS. If data are not available NMFS's ability to assure the integrity and availability of observer data in the future will not be constrained by the lack of regulatory requirements defining the needs of an observer program and mandatory coverage levels. NMFS believes that data quality will be maintained by creating a regulatory structure for managing observer and observer provider performance and assuring that participating vessels provide the basic amenities necessary for an observer to perform their required duties. In recent years the use of observer data to monitor incidental catch of overfished species and ESA listed salmonids has become increasingly important.

Table 4.6.1. Past, proposed and foreseeable future actions that are also expected to affect whiting fishers and the areas where the at-sea whiting fishery occurs.

Past Actions	• 2003 specifications and management measures - established the OYs and allocations for whiting and other groundfish species including overfished species • Amendment 13 to the groundfish FMP - among other things included an increased utilization program for the at-sea whiting fisheries. • September 27, 1993 biological opinion under the ESA -- This B.O. established the bycatch rate of 0.05 chinook salmon/mt of whiting with an 11,000 fish threshold for the entire whiting fishery (at-sea and shore-base sectors combined). Reinititiation of the biological opinion is required to consider the impacts of the whiting fishery on the chinook stocks is conducted when both the bycatch rate and bycatch limit are exceeded. • The Pacific Coast treaty Indian fishing rights - Tribal rights which are described at 50 CFR 660.324, allow for the allocation of fish to the treaty Indian fisheries through the annual specification and management process. The fishing right is generally described as the opportunity to take a fair share of the fish, which has been interpreted as up to 50 percent of the harvestable surplus of fish in the U & A. The coastal tribes receive an annual whiting allocation. • The Coastal Pelagic Species Fishery Management Plan (FMP) - Actively managed species include Pacific sardine and Pacific mackerel and monitored species include northern anchovy, jack mackerel, and squid. • Alaska groundfish Observer program regulations at 50 CRF 679.50 - Vessel and observer responsibilities. Proposed observer regulations for the WOC, duplicate the Alaska regulations for as much as practicable.
Proposed Actions	• Vessel monitoring program - Implementation of a VMS system will require all limited entry vessels to carry transceiver units to allow NMFS track movement of vessels. • Amendment 17 to the groundfish FMP – established procedures for biennual specifications and Management measures. • Amendment 16 to the groundfish FMP – Established a framework for rebuilding plans for overfished species and defines species specific rebuilding plans.
Future Actions	• EFH EIS - It is possible that NMFS would take action to make new designations for essential fish habitat and designate habitat areas for protection. •

Table 4.6.2 Expected Effects of NMFS preferred alternative if affects accumulate over time

NMFS Preferred Alternative (Alt #3-as described in sec 4.5) two NMFS-certified observers required on processing vessels equal to or greater than 125 ft (38.1 m) in length and one observer required on vessels less than 125 ft (38.1 m) in length. Vessel may voluntarily carry more; observer and observer provider certification and decertification procedures, vessel standards, and prohibitions similar to Alaska.

Actions	Combined effects of the proposed action
2003 specifications and management measures	* The 2003 at-sea whiting fishery will be completed before this action becomes effective.
Amendment 13 to the groundfish FMP	* Establishing mandatory observer requirements for the at-sea processing sector Satisfies the standardized bycatch reporting methodology requirements of the 1996 Sustainable Fisheries Act amendments to the Magnuson-Stevens Act. Under these requirements, an FMP must adopt a standardized reporting methodology for assessing the amount and kind of bycatch occurring in the fishery. * Observers provided under the preferred alternative can provide sample data that can be used to validate vessel reports required under the increased utilization program.
Biological opinion under the ESA	* Observer data has become increasingly important for monitoring incidental catch ESA listed salmonids. Mandatory observer coverage will guarantee that data will be available into the future to monitor the incidental take of salmon. * Precision of fleetwide total catch estimates are increased with 2 observers, as required under the preferred alternative, this is because all or nearly all hauls can be sampled. When all or nearly all of the hauls are sampled precision for less frequently or sporadically occurring species, such as salmon, are likely to improve.
The Pacific Coast treaty Indian fishing rights	* Mandatory observer coverage will guarantees that data will be available into the future to monitor the tribal allocation for whiting as well as incidental catch levels.
The Coastal Pelagic Species Fishery Management Plan (FMP)	* Mandatory observer coverage guarantees that data will be available into the future to monitor the incidental take of CPS.
Alaska groundfish Observer program regulations at 50 CRF 679.50	* Contracting companies, which are specified by regulations for the groundfish fishery of Alaska at 50 CRF 679.50, would benefit from the guaranteed opportunity of providing, 2 observers for every processing vessel. The information and method of submission used to schedule training, briefings or debriefings, monitor deployments and oversee observer provider performance does not change from status quo and is consistent with that provided for the Alaska program. * Because observer providers already carry general observer insurance policies for all observers regardless of where they are deployed, there would be no added cost to provide insurance for whiting observers over what is being paid for Alaska observers. * This action could result in a shortage of observers for the Alaska groundfish fishery (observer coverage requirements at 679.50(c)(v)-(vii)) if there are not an adequate numbers of qualified individuals. However, since the whiting vessel already carry two observers each under status quo, this rule is not likely to affect the Alaska groundfish observer requirements. More likely, if coverage requirement for Alaska were to increased it may reduce the availability of experience observers for the whiting fishery. If this were the case inexperience individuals would be trained as observers for the whiting fishery. * All of the processing vessels that participated in the 2001 whiting fishery have Alaska certified observer sample stations, therefore the WOC requirements are not expected to place an additional burden on these vessels. * No additional costs to vessels that meet observer health and safety requirements because they already meet these requirements for carrying observers in Alaska.

Table 4.6.2 Expected Effects of NMFS preferred alternative if affects accumulate over time, cont.

NMFS Preferred Alternative (Alt #3-as described in sec 4.5) two NMFS-certified observers required on processing vessels equal to or greater than 125 ft (38.1 m) in length and one observer required on vessels less than 125 ft (38.1 m) in length. Vessel may voluntarily carry more; observer and observer provider certification and decertification procedures, vessel standards, and prohibitions similar to Alaska.	
Actions	**Combined effects of the proposed action**
Vessel monitoring program	* The VMS transceiver units proposed for use in the WAC range in price from approximately $800 (this is contingent on the low end units being approved by OLE) to $3,800 per unit, installed. The costs per day for data transmissions is $1.67-$5. As of June 10, 2002, 50 CFR 679.7(a)(18), has required all vessels fishing in the Bering sea and Gulf of Alaska using pot, hook-and-line or trawl gear that are permitted to directly fish for Pacific cod, Atka mackerel or pollock to have an operable VMS transceiver. All processing vessel already have operable VMS units that meet the national type approval standards. * The costs of carrying an observer during whiting is about $300 per day. On average in 2001, each vessel fished for 31 days (ranging from 9-118 days). At $300 per day, the average cost to the vessel for each observer was $9,300 (ranging from $3,950 -$36,650) during the 2001 whiting season. In addition, training and debriefing costs would have been approximately $1,250 per observer.
Amendment 17 to the groundfish FMP	* Under biennial management, stock assessments that are available in year 1 of a two year cycle and intended for developing the specifications and management measures for the following 2-year cycle, would be reviewed by the Council and checked against the harvest levels for year 2 of the current cycle to ensure that they are adequate to meet rebuilding goals for overfished species and not result in overfishing. Harvest data provided by observers under the preferred alternative will benefit this process.
Amendment 16 to the groundfish FMP	* The preferred action will support rebuilding measures overtime by maintaining NMFS ability to monitor and manage harvest levels established for rebuilding.
EFH EIS	* Like VMS, observers required under the preferred alternative can be used to verify location of vessels fishing activity. Unlike VMS the observer can document the type of gear used by the vessel. * If observer coverage is mandatory data can be used to provide data regarding gear use by location.
Specification and management measures for 2004 -2005	* The preferred alternative will help to maintain data integrity over time by and reducing the risk of substandard data being used for management decisions. Observer certification insures observer competency and provides the authority to manage observer performance. Requiring a adequate sampling provision by vessels will also insure data integrity. * If observer coverage is mandatory data can be used for fisheries enforcement.

5.0 CONSISTENCY WITH THE FMP AND OTHER APPLICABLE LAWS

5.1 Consistency with the FMP

The socio-economic framework in the Pacific Coast Groundfish FMP requires that proposed management measures and viable alternatives be reviewed and consideration given to the following criteria: a) how the action is expected to promote achievement of the goals and objectives of the FMP; b) likely impacts on other management measures; c) biological impacts; d) and economic impacts, particularly on the cost to the fishing industry; and e) accomplishment of one of a list of factors.

GOALS AND OBJECTIVES OF THE FMP

The Council is committed to developing long-range plans for managing the Pacific Coast groundfish fisheries that prevent overfishing and loss of habitat, yet provide the maximum net value of the resource, and achieve maximum biological yield. Alternatives 2 and 3 are consistent with FMP goal 1-objective 1, and goal 3-objective 10.

> Goal 1- Conservation: Objective 1 -- maintain an information flow on the status of the fishery and the fishery resource which allows for informed management decisions as the fishery occurs.
>
> Goal 3- Utilization: Objective 10 -- strive to reduce the economic incentives and regulatory measures that lead to wastage of fish. Also, develop management measures that minimize bycatch to the extent practicable and, to the extent that bycatch cannot be avoided, minimize the mortality of such bycatch. In addition, promote and support monitoring programs to improve estimates of total fishing-related mortality and bycatch, as well as those to improve information necessary to determine the extent to which it is practicable to reduce bycatch and bycatch mortality.

LIKELY IMPACTS ON OTHER MANAGEMENT MEASURES AND OTHER FISHERIES

As a means to address resource conservation issues, section 6.3.1 of the FMP authorizes the use of at-sea observers to collect data that is not available and would otherwise be too onerous for some fishermen to collect. Because species that are targeted in other fisheries are caught with whiting, the data collected by observers are used to understand the incidental catch levels and relationship between species. Data collected by observers improves the ability to monitor fishing activity. Requiring mandatory observer coverage (alternatives 2 and 3) insure the availability of these data collections over time, and will thus maintain the ability to monitor management measures and the impacts on other fisheries. To the extent that data quality are improved by requiring two observers (Alterative 3) or by the mandatory observer provider or observer requirements, this action could impact other management measures and other fisheries.

ACCOMPLISHMENT OF ONE OF THE FACTORS LISTED IN FMP SECTION 6.2.3.

Under the socio-economic framework, the proposed action must accomplish at least 1 of the criteria defined in section 6.2.3 of the FMP. Alternatives 2 and 3 are likely to accomplish objective 2 of the FMP by providing information to avoid exceeding a quota, harvest guideline or allocation, and objective 13 of the FMP by maintaining a data collection and means for verification.

5.2 Magnuson-Stevens Conservation and Management Act

The Magnuson-Stevens Act provides parameters and guidance for federal fisheries management, requiring that the Councils and NMFS adhere to a broad array of policy ideals. Overarching principles for fisheries management are found in the Magnuson Act's National Standards. In crafting fisheries management regimes, the Councils and NMFS must balance their recommendations to meet these different national standards.

National Standard 1 requires that conservation and management measures shall prevent overfishing while achieving on a continuing basis, the optimum yield from each fishery for the United States fishing industry. The proposed action is to implement a sampling program to monitor approved fishing activities. Data collected through this program will be used to manage the fishery harvests to stay within the OYs. Timely

information is needed to reduce the likelihood of overfishing. The status quo alternative, Alternative 1, may not achieve the standard if vessels choose to not carry observers.

National Standard 2 requires the use of the best available scientific information. The proposed action is to implement a sampling program to monitor approved fishing activities. Data collected through this program will provide timely catch and biological data from the at-sea fishery. Under Alternative 1, the observer data would likely continue be considered the best available harvest data for the fishery and is used to manage the attainment of OYs and allocations. Alternatives 2 and 3 would not change how whiting observer data were used. Both would provide best available information. However, Alternative 3 would assure that more data were available in the future.

National Standard 3 requires, to the extent practicable, that an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination. This standard is not affected by the proposed actions.

National Standard 4 requires that conservation and management measures shall not discriminate between residents of different States. None of the alternatives would discriminate between residents of different States.

National Standard 5 is not affected by the proposed actions because it does not affect efficiency in the utilization of fishery resources.

National Standard 6 requires that Conservation and management measures take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches." All alternatives meet this standard.

National Standard 7 requires that Conservation and management measures to minimize costs and avoid unnecessary duplication. Because of similarities between the Alaska groundfish fisheries and the at-sea whiting fishery, the proposed regulatory requirements and regulations for the federal groundfish fishery off Alaska are as similar as is practicable. The results is minimal costs to observers, observer providers and industry. In addition, these similarities allow NMFS to minimize duplication costs to the agency by utilizing the existing infrastructure at the at the Northwest and Alaska fishery science centers.

National Standard 8 provides protection to fishing communities by requiring that conservation and management measures be consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities. The proposed alternatives are consistent with this standard.

National Standard 9 requires that conservation and management measures to minimize bycatch and minimize the mortality of bycatch. On March 3, 1999, those portions of Amendment 11 to the Pacific Coast Groundfish FMP concerning the reduction of bycatch and bycatch mortality were not approved by NMFS because the bycatch provisions in Amendment 11 failed to respond meaningfully to the bycatch requirements of the Magnuson-Stevens Act. Amendment 11 addressed bycatch through the FMP's framework mechanism, by revising one of the objectives of the FMP to read, "Strive to reduce the economic incentives and regulatory measures that lead to wastage of fish. Also, develop management measures that minimize bycatch to the extent practicable and, to the extent that bycatch cannot be avoided, minimize the mortality of such bycatch. In addition, NMFS is required to "promote and support monitoring programs to improve estimates of total fishing-related mortality and bycatch, as well as those to improve information necessary to determine the extent to which it is practicable to reduce bycatch and bycatch mortality.' Alternatives 2 and 3 are consistent with national standard 9.

National Standard 10 conservation and management measures shall, to the extent practicable, promote the safety of human life at sea. Under either Alternatives 2 or 3, observers would be NMFS-certified and would therefore be considered observers under the Magnuson-Stevens Act and the vessels would be required to meet observer heath and safety provisions at 50 CFR 600.725 and 600.746. Because the

participating vessels meet similar requirements while carrying observers in the groundfish fisheries off Alaska, there is no measurable difference between the alternatives, in either supporting or impairing safety of human life.

Essential Fish Habitat This action will affect fishing in areas designated as essential fish habitat (EFH) by Amendment 11 to the FMP. The proposed action is to implement a sampling program to monitor approved fishing activities. Because the action is not expected to change fishing behavior from the existing circumstances, the potential effects of the proposed actions are not expected to have either no adverse effect on EFH, or to have a positive effect resulting from reduced fishing effort.

5.3 Endangered Species Act

NMFS issued Biological Opinions (B.O.) under the ESA on August 10, 1990, November 26, 1991, August 28, 1992, September 27, 1993, May 14, 1996, and December 15, 1999 pertaining to the effects of the groundfish fishery on chinook salmon (Puget Sound, Snake River spring/summer, Snake River fall, upper Columbia River spring, lower Columbia River, upper Willamette River, Sacramento River winter, Central Valley spring, California coastal), coho salmon (Central California coastal, southern Oregon/northern California coastal), chum salmon (Hood Canal summer, Columbia River), sockeye salmon (Snake River, Ozette Lake), and steelhead (upper, middle and lower Columbia River, Snake River Basin, upper Willamette River, central California coast, California Central Valley, south-central California, northern California, southern California). During the 2000 Pacific whiting season, the whiting fisheries exceeded the 11,000 fish chinook bycatch amount specified in the Pacific whiting fishery B.O. (December 19, 1999) incidental take statement, by approximately 500 fish. In the 2001 whiting season, however, the whiting fishery's chinook bycatch was about 7,000 fish, which approximates the long-term average. After reviewing data from, and management of, the 2000 and 2001 whiting fisheries (including industry bycatch minimization measures), the status of the affected listed chinook, environmental baseline information, and the incidental take statement from the 1999 whiting B.O., NMFS determined that a re-initiation of the 1999 whiting BO was not required. NMFS has concluded that implementation of the FMP for the Pacific Coast groundfish fishery is not expected to jeopardize the continued existence of any endangered or threatened species under the jurisdiction of NMFS, or result in the destruction or adverse modification of critical habitat. This proposed rule implements a data collection program and is within the scope of these consultations. Because the impacts of this action fall within the scope of the impacts considered in these B.O.s, additional consultations on these species are not required for this action. Furthermore, the data collected by observers will assist in future management decisions.

5.4 Marine Mammal Protection Act

Under the MMPA, marine mammals whose abundance falls below the optimum sustainable population level (usually regarded as 60% of carrying capacity or maximum population size) can be listed as "depleted". Populations listed as threatened or endangered under the ESA are automatically depleted under the terms of the MMPA. Currently the Stellar sea lion population in the WOC is listed as threatened under the ESA and the fur seal population is listed as depleted under the MMPA. Incidental takes of these species in the Pacific coast fisheries are well under the annual PBR. None of the proposed management alternatives are likely to affect the incidental mortality levels of species protected under the MMPA.

The WOC groundfish fisheries are considered category III fisheries where the annual mortality and serious injury of a stock by the fishery is less than or equal to 1 percent of the PBR level. Implementation of Alternatives 2 and 3 is expected to benefit MMPA species by assuring that information on interactions and incidental takes of marine mammals continues into the future.

5.5 Coastal Zone Management Act

The proposed alternatives would be implemented in a manner that is consistent to the maximum extent practicable with the enforceable policies of the approved coastal zone management programs of Washington, Oregon, and California. This determination has been submitted to the responsible state

agencies for review under section 307(c)(1) of the Coastal Zone Management Act (CZMA). The relationship of the groundfish FMP with the CZMA is discussed in Section 11.7.3 of the groundfish FMP. The groundfish FMP has been found to be consistent with the Washington, Oregon, and California coastal zone management programs. The recommended action is consistent and within the scope of the actions contemplated under the framework FMP. The recommended action will conserve and maintain the sablefish resource.

Under the CZMA, each state develops its own coastal zone management program which is then submitted for federal approval. This has resulted in programs which vary widely from one state to the next. The EA for Amendment 14 to groundfish FMP contains a summary of the fishery relevant consistency criteria used in federal consistency determinations by each state.

5.6 Paperwork Reduction Act

This action contains a collection-of-information subject to the PRA. Under alternatives 2 and 3 certified observer providers would be required to submit information to the NPGOP that would be used to: (1) Coordinate and conduct effective and efficient scheduling of observers for training, briefing , and debriefing sessions; (2) maintain an observer deployment database; and (3) monitor the ongoing ability of a company to meet the requirements of a certified observer provider. This information would include but is not limited to:

(A) A list of prospective observers to be hired upon approval by the Regional Director and observer training/briefing registration;
(B) Projected observer assignment
(C) Observer deployment/logistics reports
(D) Observer debriefing registration
(E) Certificate of insurance that verifies compliance with the insurance coverage
(F) Observer's physical examination notice -indicating that they passed exam within the past 12 months
(G) Copy of each type of signed an valid contract with observers
(H) Reports of observer harassment, concerns about vessel or processor safety, or observer performance problems submitted to the NPGOP office.
(I) College transcript and disclosure statement
(J) Observer appeals statements

These materials all represent a new collection of information that are subject to the Paperwork Reduction Act (PRA). Even though the information is new under the PRA, hiring materials and weekly observer deployment reports information have been submitted by observer providers for the past several years. The estimated time for observers to submit documentary evidence or to petition a rejected certification, suspension or decertification decision is 4 hours per response. Although the proposed rule does not contain requirements specific to the observer contracting companies, these companies do voluntarily submit information to NMFS. The estimated time for this collection is as follows: training/briefing registration lists: 7 minutes per response; notification of physical examinations: 2 minutes per response; time required for physical exam: 2 hours; lists of projected observer assignments: 7 minutes per response; weekly logistics reports: 7 minutes per response; debriefing registration materials: 7 minutes per response; and reports on observer harassment, safety or performance concerns: 2 hours per response. The total annual response time for all submissions from observer providers is expected to be 45 hours. All estimates of annual response time include time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection information. Appendix A shows the costs of the contractor submissions under the different alternatives.

5.7 Executive Order 12866

None of the proposed alternatives would be a significant action according to E.O. 12866. This action will not have a cumulative effect on the economy of $100 million or more nor will it result in a major increase in costs to consumers, industries, government agencies, or geographical regions. No significant adverse impacts are anticipated on competition, employment, investments, productivity, innovation, or competitiveness of U.S.-based enterprises.

5.8 Executive Order 13175

Executive Order 13175 is intended to ensure regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies that have tribal implications, to strengthen the United States government-to-government relationships with Indian tribes, and to reduce the imposition of unfunded mandates upon Indian tribes.

The Secretary of Commerce recognizes the sovereign status and co-manager role of Indian tribes over shared Federal and tribal fishery resources. At Section 302(b)(5), the Magnuson-Stevens Act reserves a seat on the Council for a representative of an Indian tribe with Federally recognized fishing rights from California, Oregon, Washington, or Idaho.

The U.S. government formally recognizes that the four Washington Coastal Tribes (Makah, Quileute, Hoh, and Quinault) have treaty rights to fish for groundfish. In general terms, the quantification of those rights is 50 percent of the harvestable surplus of groundfish available in the tribes' usual and accustomed (U and A) fishing areas (described at 50 CFR 660.324). Each of the treaty tribes has the discretion to administer their fisheries and to establish their own policies to achieve program objectives. The proposed regulations have been developed in consultation with the affected tribe(s) and, insofar as possible, with tribal consensus.

5.9 Migratory Bird Treaty Act and Executive Order 13186

The Migratory Bird Treaty Act of 1918 was designed to end the commercial trade of migratory birds and their feathers that, by the early years of the 20th century, had diminished populations of many native bird species. The Act states that it is unlawful to take, kill, or possess migratory birds and their parts (including eggs, nests, and feathers) and is a shared agreement between the United States, Canada, Japan, Mexico, and Russia to protect a common migratory bird resource. The Migratory Bird Treaty Act prohibits the directed take of seabirds, but the incidental take of seabirds does occur. None of the proposed management alternatives, or the Council recommended action are likely to affect the incidental take of seabirds protected by the Migratory Bird Treaty Act.

Executive Order 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds) is intended to ensure that each Federal agency taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations develop and implement a Memorandum of Understanding (MOU) with the U.S. Fish and Wildlife Service that shall promote the conservation of migratory bird populations. Currently, NMFS is planning to develop and implement a MOU with the U.S. Fish and Wildlife Service. None of the proposed management alternatives are likely to have a measurable negative effect on migratory bird populations.

5.10 Executive Order 12898 (Environmental Justice) and 13132 (Federalism)

The EO states that environmental justice should be part of an agency's mission "by identifying and addressing disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority or low-income populations." Any adverse impacts of the proposed action will be in proportion to the level of catch that participants take in the fixed gear sablefish fishery.

These recommendations would not have federalism implications subject to E.O. 13132. State representatives on the Council have been fully consulted in the development of this policy recommendation.

6.0 REGULATORY IMPACT REVIEW AND REGULATORY FLEXIBILITY ANALYSIS

The RIR and IRFA analyses have many aspects in common with each other and with EAs. Much of the information required for the RIR and IRFA analysis has been provided above in the EA. Table 6.0.1 identifies where previous discussions relevant to the EA and IRFA can be found in this document. In addition to the information provided in the EA, above, a basic economic profile of the fishery is provided annually in the Council's SAFE document.

Table 6.0. 1 Regulatory Impact Review and Regulatory Flexibility Analysis

RIR Elements of Analysis	Corresponding Sections in EA	RFA Elements of Analysis	Corresponding Sections in EA
Description of management objectives	1.3	Description of why actions are being considered	1.1
Description of the Fishery	3.3, 1.2	Statement of the objectives of, and legal basis for actions	1.2 & 1.3
Statement of the Problem	1.2 & 1.3	Description of projected reporting, recordkeeping and other compliance requirements of the proposed action	5.6 & Appendix A
Description of each selected alternative	2.1 & 4.5	Identification of all relevant Federal rules	5.2, 5.3, 5.4, 5.6 & 5.9
An economic analysis of the expected effects of each selected alternative relative to status quo	4.3 & 4.4		

6.1 Regulatory Impact Review

The RIR is designed to determine whether the proposed actions could be considered a "significant regulatory actions" according to E.O. 12866. E.O. 12866 test requirements used to assess whether or not an action would be a "significant regulatory action", and identifies the expected outcomes of the proposed management alternatives. 1) Have a annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local, or tribal governments or communities;2) Create a serious inconsistency or otherwise interfere with action taken or planned by another agency; 3) Materially alter the budgetary impact of entitlement, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or 4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this executive Order. Based on results of the economic analysis contained in section 4.3, this action is not expected to be significant under E.O. 12866.

Table 6.1.2 Summary of E.O. 12866 Test Requirements

E.O 12866 Test of "Significant Regulatory Actions	**Alternative 1: Status quo**	**Alternative 2:** One observer, observer and observer provider certification/decertification procedures, vessel standards, and prohibitions	**Alternative 3:** Two observer, observer and observer provider certification/decertification procedures, vessel standards, and prohibitions
1) Have a annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local, or tribal governments or communities;	No	No	No
2) Create a serious inconsistency or otherwise interfere with action taken or planned by another agency;	No	No	No
3) Materially alter the budgetary impact of entitlement, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or	No	No	No
4**)** Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this executive Order,	No	No	No

6.2 The Regulatory Flexibility Act

The RFA recognizes and defines three kinds of small entities: (1) small businesses, (2) small non-profit organizations, and (3) and small government jurisdictions**.**

Small businesses. Section 601(3) of the RFA defines a 'small business' as having the same meaning as 'small business concern' which is defined under Section 3 of the Small Business Act. 'Small business' or 'small business concern' includes any firm that is independently owned and operated and not dominate in its field of operation. The SBA has further defined a "small business concern" as one "organized for profit, with a place of business located in the United States, and which operates primarily within the United States or which makes a significant contribution to the U.S. economy through payment of taxes or use of American products, materials or labor. A small business concern may be in the legal form of an individual proprietorship, partnership, limited liability company, corporation, joint venture, association, trust or cooperative, except that where the form is a joint venture there can be no more than 49 percent participation by foreign business entities in the joint venture."

The SBA has established size criteria for all major industry sectors in the US including fish harvesting and fish processing businesses. A business involved in fish harvesting is a small business if it is independently owned and operated and not dominant in its field of operation (including its affiliates) and if it has combined annual receipts not in excess of $ 3 million for all its affiliated operations worldwide. A seafood processor is a small business if it is independently owned and operated, not dominant in its field of operation, and employs 500 or fewer persons on a full-time, part-time, temporary, or other basis, at all its affiliated operations worldwide. A business involved in both the harvesting and processing of seafood products is a small business if it meets the $3 million criterion for fish harvesting operations. Finally a wholesale business servicing the fishing industry is a small businesses if it employs 100 or fewer persons on a full-time, part-time, temporary, or other basis, at all its affiliated operations worldwide.

The SBA has established "principles of affiliation" to determine whether a business concern is "independently owned and operated." In general, business concerns are affiliates of each other when one concern controls or has the power to control the other, or a third party controls or has the power to control both. The SBA considers factors such as ownership, management, previous relationships with or ties to another concern, and contractual relationships, in determining whether affiliation exists. Individuals or firms that have identical or substantially identical business or economic interests, such as family members, persons with common investments, or firms that are economically dependent through contractual or other relationships, are treated as one party with such interests aggregated when measuring the size of the concern in question. The SBA counts the receipts or employees of the concern whose size is at issue and those of all its domestic and foreign affiliates, regardless of whether the affiliates are organized for profit, in determining the concern's size. However, business concerns owned and controlled by Indian Tribes, Alaska Regional or Village Corporations organized pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601), Native Hawaiian Organizations, or Community Development Corporations authorized by 42 U.S.C. 9805 are not considered affiliates of such entities, or with other concerns owned by these entities solely because of their common ownership.

Affiliation may be based on stock ownership when (1) A person is an affiliate of a concern if the person owns or controls, or has the power to control 50% or more of its voting stock, or a block of stock which affords control because it is large compared to other outstanding blocks of stock, or (2) If two or more persons each owns, controls or has the power to control less than 50% of the voting stock of a concern, with minority holdings that are equal or approximately equal in size, but the aggregate of these minority holdings is large as compared with any other stock holding, each such person is presumed to be an affiliate of the concern.

Affiliation may be based on common management or joint venture arrangements. Affiliation arises where one or more officers, directors or general partners controls the board of directors and/or the management of another concern. Parties to a joint venture also may be affiliates. A contractor and subcontractor are treated as joint venturers if the ostensible subcontractor will perform primary and vital requirements of a contract or if the prime contractor is unusually reliant upon the ostensible subcontractor. All requirements of the contract are considered in reviewing such relationship, including contract management, technical responsibilities, and the percentage of subcontracted work.

Small organizations. The RFA defines "small organizations" as any nonprofit enterprise that is independently owned and operated and is not dominant in its field.

Small governmental jurisdictions. The RFA defines small governmental jurisdictions as governments of cities, counties, towns, townships, villages, school districts, or special districts with populations of less than 50,000.

Initial Regulatory Flexibility Analysis

When an agency proposes regulations, the RFA requires the agency to prepare and make available for public comment an Initial Regulatory Flexibility Analysis (IRFA) that describes the impact on small businesses, non-profit enterprises, local governments, and other small entities. The IRFA is to aid the agency in considering all reasonable regulatory alternatives that would minimize the economic impact on affected small entities (attachment 1). To ensure a broad consideration of impacts on small entities, NMFS has prepared this IRFA without first making the threshold determination whether this proposed action could be certified as not having a significant economic impact on a substantial number of small entities. NMFS, must determine such certification to be appropriate if established by information received in the public comment period.

Requirements of an IRFA

The RIR and IRFA analyses have many aspects in common with each other and with EAs. Much of the information required for the RIR and IRFA analysis has been provided above in the EA.

The Regulatory Flexibility Act (5 U.S.C. 603) states that:

(b) Each initial regulatory flexibility analysis required under this section shall contain--

(1) a description of the reasons why action by the agency is being considered:
(2) a succinct statement of the objectives of, and legal basis for, the proposed rule;
(3) a description of and, where feasible, and estimate of the number of small entities to which the proposed rule will apply;
(4) a description of the projected reporting, recordkeeping and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record;
(5) an identification, to the extent practicable, of all relevant Federal rules which may duplicate, overlap, or conflict with the proposed rule.

(c) Each initial regulatory flexibility analysis shall also contain a description of any significant alternatives to the prosed rule which accomplish the stated objectives of applicable statutes and which minimize any significant economic impact of the proposed rule on small entities. Consistent with the stated objectives of applicable statutes, the analysis shall discuss significant alternatives such as--

(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities;
(2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities;
(3) the use of performance rather than design standards; and
(4) an exemption from coverage of the rule, or any part thereof, for such small entities.

1) A description of the reasons why the action by the agency is being considered.

This action is necessary to satisfy the standardized bycatch reporting methodology requirements of the 1996 Sustainable Fisheries Act amendments to the Magnuson-Stevens Act Under these requirements, a FMP must adopt a standardized reporting methodology for assessing the amount and kind of bycatch occurring in the fishery. In addition, this action will benefit fisheries conservation and management by providing information needed for enforcing fishery regulations, maintaining safe and adequate working conditions for observers, and establishing certification and performance standards for observers to ensure that quality data are available for managing the fishery.

NMFS's ability to assure the integrity and availability of observer data in the future is constrained by the lack of regulatory requirements defining the needs of an observer program and mandatory coverage levels. NMFS believes that data quality will be maintained by creating a regulatory structure for managing observer and observer provider performance and assuring that participating vessels provide the basic amenities necessary for an observer to perform their required duties. In recent years the use of observer data to monitor incidental catch of overfished species and ESA listed salmonids has become increasingly important. In response to the court and to maintain a source of quality data in the future and to establish a

mandatory and adequate observer program aboard the at-sea processing fleet, NMFS believes that it is necessary to move forward with a revised proposed rule at this time.

2) A succinct statement of the objectives of, and legal basis for, the proposed rule.

The Federal groundfish fishery off the Washington, Oregon, and California (WOC) coasts is managed pursuant to the Magnuson-Stevens Act and the Pacific Coast Groundfish FMP. The FMP was developed by the Council. Regulations implementing the FMP appear at 50 CFR part 660 subpart G.

The Magnuson-Stevens Act at 16 USC 1853(a)(11) requires each FMP to establish a standardized reporting methodology to assess the amount and type of bycatch occurring in the fishery. Further, at 16 USC 1853(b)(8), the Act provides that an FMP may require that one or more observers be carried aboard a vessel of the United States engaged in fishing for species that are subject to an FMP, for the purpose of collecting data necessary for the conservation and management of the fishery. Placement of fishery observers on vessels at sea is acknowledged as an important method for collecting fisheries data. Therefore, the Pacific Coast Groundfish FMP provides that all catcher/processors and at-sea processing vessels operating in the groundfish fishery may be required to accommodate on board observers for purposes of collecting scientific data. Amendment 13 to the FMP also provides that vessel owners may be required to pay for observers. Under the Magnuson-Stevens Act at 16 USC 1855(d), the Secretary of Commerce, acting through NMFS, has general responsibility to carry out any fishery management plan and may promulgate such regulations as may be necessary to carry out this responsibility.

3) A description of and, where feasible, and estimate of the number of small entities to which the proposed rule will apply;

Approximately seven WOC groundfish catcher/processors and five mothership processors will be affected by this proposed rulemaking. The Small Business Administration (SBA) guidelines for fishing firms uses a $3,000,000 gross revenue threshold to separate small from large operations. In the application to any one firm, the $3,000,000 threshold considers income to all affiliated operations. NMFS records indicate that the gross annual revenue for each of the catcher/processor and mothership operations operating in the WOC exceeds $3,000,000 and are therefore not considered small businesses. On averaged in 1998 the catcher/processor and mothership operations gross revenue was more than $15,000,000.

Between fifteen and twenty catcher vessel participate in the fishery annually, these companies are all assumed to be small businesses. This rulemaking is expected to have minimal impacts on the business that catcher vessels conduct with the mothership processors. A separate proposed rule to establish an observer program for catcher vessels in the groundfish fishery off Washington, Oregon, and California was published on September 14, 2000 (65 FR 55495).

Up to 30 observers could be deployed annually in the at-sea whiting fishery. Observers are individuals who are hired and deployed by third party companies that are small businesses. The observer providers hold contracts with the processing vessels and the observers. Mandatory coverage provisions are expected to benefit the providers by insuring that each vessel carries at least two observers in the future. No negative impacts to the contracting companies are expected. Four companies that met the certification requirements for the Alaskan groundfish observer program have been providing support services for observers in the whiting fishery since 1991.

This rulemaking also contains certification and decertification requirements that apply to observers. Under this proposed rulemaking there would be regulatory language that would provide NMFS with the authority to suspend or decertify observers who do not meet performance standards or behave in an manner that is contrary to the defined "standards of conduct". The annual cost burden to these individuals to provide documentary evidence or petitions in opposition of the NMFS action is expected to be 8$ per observer. It is expected that up to 5 percent of the individual observers could be affected annually.

4) A description of the projected reporting, recordkeeping and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record.

Projected reporting, recordkeeping and compliance requirements defined by the proposed rule would be the information for an appeal to an observer decertification. This is a narrative document that is voluntarily submitted by observers and would not require special skills or training. Observers voluntarily submit information for an appeal. Not all individuals are expected to respond. The appeals process provides observers with a way to submit evidence and to argue in opposition to a suspension or decertification notice. It is anticipated that a maximum of two observers per year will submit responses within 30 day of being notified that they are suspended or decertified.

The proposed rule does not specify recordkeeping requirements for observer providers, however NMFS assumes that the following information will continue to be voluntarily submitted by observer providers;:

Training/briefing Registration. Prior to the beginning of a scheduled observer certification training session observer providers send the following information: date of requested training; a list of observer candidates that includes each candidate's full name (i.e., first, middle and last names), date of birth, and sex; a copy of each candidate's academic transcripts and resume; and a statement signed by the observer candidate under penalty of perjury which discloses the candidate's criminal convictions. The requested information ensures that sufficient class space will be reserved for the candidates during the training session requested and that each potential, new observer meets the observer educational qualification standards. The disclosure statement of criminal record is a new requirement intended to disclose the candidate's past criminal record that demonstrates an absence of criminal records related to: embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property, or the commission of any other offense indicating a lack of integrity or honesty that would seriously and directly affect the fitness of an candidate to fulfill the observer responsibilities.

Notification of Observer's Physical Examination. Physical examinations are necessary because working aboard vessels or in processors is a dangerous occupation. An individual must be physically fit with no safety-endangering conditions. Notification of the physical examination allows NMFS to verify that all observers meet standards in the program.

Projected Observer Assignments. This information is used by the training or briefing instructor to adapt classroom instruction to meet the specific needs of the individual(s) in the training or briefing class. It is also used by the instructor when giving "special project" assignments to students .This information must be submitted to the Observer Program Office prior to the completion of the training or briefing session and includes the following: the observer's name, vessel, port of embarkation

Observer Weekly Deployment/logistics Reports. This information is used for routine record keeping in the NMFS observer database. Accurate and timely observer deployment information is important for fisheries management. Knowing where observers are at all times is also important should emergencies arise while an observer is deployed at sea. This information must be submitted weekly as directed by the Observer Program Office and include the following: observer's name, cruise number, current vessel, vessel code, embarkation date estimated and actual disembarkation dates

Observer Debriefing Registration. This information allows for an efficient and effective debriefing process of an observer with NMFS personnel through a one-on-one interview.Observer debriefing registration information must include: the observer's name, cruise number, vessel, and requested debriefing date.

Reports of Observer Harassment, Observer Safety Concerns, or Observer Performance Problems. Review of these reports provides NMFS with an effective tool to monitor and enforce standards of conduct of observers and to identify problems on vessels that may compromise the observers health and well being. Reports on the following topics must be submitted to the Observer Program by the observer provider within 24 hours after the observer provider becomes aware of the problem:observer harassment any prohibited action against observersconcerns about vessel or processor safety any observer illness or injury that prevents them from completing their duties any information, allegations or reports regarding observer conflict of interest or breech of the observer standards of behavior.

5) An identification, to the extent practicable, of all relevant Federal rules which may duplicate, overlap, or conflict with the proposed rule.

At-sea processing vessels operating in the whiting fishery generally participate in the Alaska groundfish fisheries during the same calendar year, and are subject to Federal observer regulations at 50 CFR 679.50. These vessels also participate in the restricted access fisheries in Alaska, which require certified observer sampling stations. In developing observer regulations for the WOC whiting fisheries, the Alaskan observer regulations have been duplicated as much as possible, recognizing differences in Pacific coast groundfish fisheries, management strategies and objectives, and uses of observer data.

Under this proposed rule, at-sea processing vessels will be required to obtain their observers from third-party observer provider companies that are subject to the Alaskan regulations at 50 CFR 679.50. These are comprehensive regulations that provide for permitting and permit sanctions against the observer provider companies. There is no need to duplicate these provisions in the WOC regulations, as the observer provider companies will be regulated under the Alaska regulations by the NMFS Alaska Region. Therefore, the proposed action refers to the Alaskan requirements for observer providers, but does not repeat them in the WOC regulations.

6) A summary of economic impacts.

By defining mandatory coverage levels, vessel responsibilities, prohibited actions; and operational and physical requirements for sample stations, the socio-economic burden on industry will be increased over status quo. Alternatives 2 (one mandatory observer) and 3 (two mandatory observers on processors over 125 ft in length and one on vessels 124 ft and under) would implement mandatory coverage requirements. Under either of these Alternatives vessels may voluntarily carrying more observers if they choose. Because vessels currently carry two observers on a voluntary basis, the coverage requirements proposed under either Alternatives 2 or 3 would not result in an additional burden on the fleet over what is already being incurred under a voluntary program. Under Alternatives 2 and 3, the defined vessel responsibilities and prohibited actions are consistent with those that apply to the groundfish fishery off Alaska and for the most part those occurring under status quo. Because each of the whiting processors also participate in the groundfish fishery off Alaska, maintaining these provisions while participating in the whiting fishery would not create substantial burden on any vessel providing it is in compliance with the Alaska regulations. Alternative 2 and 3 also define sample station and operational requirements, that are consistent with those required for the Alaska restricted access fisheries for catcher/processors and mothership processors. All of the processing vessels that participated in the 2001 whiting fishery have Alaska certified observer sample stations, therefore the WOC requirements are not expected to place an additional burden on these vessels.

Requiring observers to adhere to the same standards as they are required to follow when they are deployed in Alaska (Alternatives 2 and 3) would create only a small burden on the observers. The annual cost burden on whiting observers is expected to be $120 (5$/observer) for Alternative 2 or $240 for status quo or Alternatives 3 (see Appendix A). These are from the costs related to the appeals process for

certification, suspension and decertification, which are only expected to affect 5% of the WOC observers per year.

Under status quo, the industry pays private companies directly for observer coverage. Day-to-day competition between these private companies may leave observers vulnerable and give rise to poor work conditions which may have an affect on observer morale. Alternatives 2 and 3 contain regulatory requirements that specifying the duties and responsibilities of observer contracting companies who provide support services for whiting observers, there are also requirements pertaining to observer provider certification and performance standards for the WOC. Without regulations or contractual agreements defining observer provider certification requirements, responsibilities, deployment conditions, standards of conduct, conflict of interest standards and procedures for suspension and decertification, NMFS is limited in its ability to oversee the actions of contracting companies. Although no significant observer provider problems have been identified that are specific only to the WOC, potential damages to both observers and the data integrity do exist. Under Alternatives 2 and 3 certified observer providers would be required to submit information to the NPGOP that would be used to: (1) Coordinate and conduct effective and efficient scheduling of observers for training, briefing , and debriefing sessions; (2) maintain an observer deployment database; and (3) monitor the ongoing ability of a company to meet the requirements of a certified observer provider. These materials have been submitted voluntarily by observer providers for the past several years. The estimated annual cost of this information for all providers combined is $1688 for Alternative 2 and $2008 for Alternative 3 (see Appendix A). Under status quo, providers voluntarily provide $1116 of costs expected under Alternatives 2 and 3. Although observer provider costs have been estimated for this analysis, it must be noted that the lack of economic data make observer provider costs difficult to estimate accurately. The cost of the new information collected would be borne by the observer provider however, the expected benefits to the observer provider from mandatory observer coverage requirements under Alternatives 2 and 3 are expected to exceed the additional costs.

Adopting observer provider certification and decertification regulations similar to those used in the Alaska groundfish fishery (Alternatives 2 or 3) would provide more structure to the relationship between NMFS and these private observer contracting companies. However, experience in Alaska has found that observers are quite vulnerable without a direct contractual relationship between the government. and the observer companies (MRAG 2000).

Because NMFS has no authority to regulate either observer or enter provider performance or to resolve conditions that undermine data quality deficiencies would be difficult to eliminate. Although this is not a wide-scale problem, using substandard or inadequate data is costly to the agency because since it would impairs the ability to manage the fishery resources and increase the risk of error associated with inseason fishery management decisions. Similarly, the information base from which the fishery is managed would be lacking if all or some of the vessels should choose not to carry an observer, or choose not to provide NMFS with landing data. Under status quo, the risk of losing all or a portion of data used for management decisions is high. Developing new methods for estimating and monitoring harvest mortality in the at-sea processing sector would be costly to NMFS and place additional demands on management and enforcement, at a time when resources are limited.

Under status quo, there are no provisions requiring whiting vessels to provide safe and adequate working conditions specifically for observers. It is unclear how Magnuson-Stevens Act regulations (50 CFR part 600) which provide observer health and safety standards apply to the current whiting observers. Because all of the processing vessels which participate in the at-sea whiting fishery must comply with general U.S. Coast Guard safety regulation, no additional burden is expected under either Alternatives 2 or 3, because the processing vessels follow Coast Guard regulations at 46 CFR Chapter I, pertaining to the safe operation of a vessel and are required to meet the observer health and safety standards at 50 CFR 600.725, 600.746, and 679.50 while carrying observers in Alaska.

7) A description of any alternatives to the proposed rule which accomplish the stated objectives of applicable statutes and which minimizes and significant economic impacts of the proposed rule on small entities.

NMFS prepared a proposed rule to amend the regulations implementing the Pacific Coast Groundfish Fishery Management Plan (FMP) to provide for a mandatory, vessel-financed observer program on at-sea processing vessels. This action would require processing vessels to employ and pay for either one or two (depending on vessel length) NMFS-certified observers obtained from a third-party NMFS-permitted observer provider company while participating in the Pacific Coast groundfish fishery. The action also specifies certification and decertification requirements for observers, and defines the responsibilities of observers and processing vessels. With the exception of the required level of observer coverage, Alternative 2 and 3 are the same. Alternative 2 (the Council preferred alternative) would have required one observer be on the processing vessel whenever the vessel fished. Although requiring vessels to carry one observer meets the minimum requirments, requiring large processing vessels to carry two observers is expected to improve the accuracy of catch projections and reduce the likelihood of overestimating or underestimating the harvested amounts of target and incidentally caught species. Data inaccuracies could affect the long-term biological stability and yield of whiting or incidentally caught species. The ESA terms and conditions for incidental take of chinook salmon in the whiting fishery are also more likely to be met.

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8.0 LIST OF PREPARERS

This document was prepared by NMFS staff from the Sustainable Fisheries Division, Northwest Region 7600 Sand Point Way N.E., Seattle, WA 98115-0070, in consultation with NOAA General Council, Northwest Region, Dave Colpo of Pacific States Marine Fisheries Commision, and Jim Hastie of the Northwest fishery Science Center.

9.0 APPENDIX A

I. ANNUAL INFORMATION COLLECTION COST TO CERTIFIED OBSERVER PROVIDERS

A. Application
Number of certified observer providers 4
(WOC observer providers must be certified observer providers for the north Pacific groundfish fisheries. Therefore there is no requirements form theses companies)

B. Certificates of Insurance
Number of certified observer providers 4
Time requirement for each certificate of insurance . . . . . 3 min
Annual time requirement for certificates of insurance
(4 applicants x 3 min/60 min) . . . . . 0.2 hours
Cost per hour in dollars $30/hour
Annual cost for certificate of insurance information
(0.2 hour x $30/hour) $6.00
Annual time burden per response (3 min/60 min) . . . . . 0.05 hours

C. Training/briefing registration
Number of annual training/briefing registrations . . . . . 24 (Alternative 2)
. . . . . 30 (Alternative 1 or 3)

Time requirement for each training/briefing registration . . . . . 7 min
Annual time required for training/briefing registration
(Alternative 2--24 debriefings x 7 min/60 min) . . . . . 2.8 hours
(Alternative 1 or 3--30 debriefings x 7min/60 min) . . . . . 3.5 hours

Cost per hour in dollars $30/hour

Annual cost for training /briefing registration in dollars
(Alternative 2--2.8 hours x $30/hour) $84
(Alternative 1 or 3--3.5 hours x $30/hour) $105

Annual time burden per response (7 min/60 min) . . . . . 0.12 hours

D. Notification of observer physical examination
Number of notifications per year . . . . . 24 (Alternative 2)
. . . . . 30 (Alternative 1 or 3)
Time requirement for each notification of observer physical examination . . . . . .2 min
Annual time required for notification of observer physical examination
(Alternative 2-- 24 registrations x 2 min/60 min) 0.8.hours
(Alternative 1 or 3-- 30 registrations x 2 min/60 min) 1.0.hours
Cost per hour in dollars $30/hour
Annual cost for notification of observer physical examination in dollars
(Alternative 2-- 0.8 hours x $30/hour) $24
(Alternatives 1 or 3-- 1.0 hours x $30/hour) $30
Annual time burden per response (2 min/60 min) . . . . . 0.03 hours
Time requirement for each physical examination . . . . . 2 hours
Annual time requirement for physical examinations
(Alternative 2-- 24 observer x ¼ year = 6 observers x 2 hours) . . . . . 12 hours
(Alternatives 1 or 3-- 30 observer x ¼ year = 7.5 observers x 2 hours) . . . . . 15 hours
Cost per physical exam $45
Annual cost of physical exams
Alternative 2 . . . . . $270.0
Alternative 1 or 3 . . . . . $337.5

E. Projected observer assignment information

Number of observer assignments per year . . . . . 24 (Alternative 2)
. . . . . 30 (Alternative 1 or 3)
Time requirement for each observer assignment . . . . . 7 min
Annual time requirement for observer assignments
(Alternative 2-- 24 assignments x 7 min/60 min) . . . . . 2.80 hours
(Alternative 1 or 3-- 30 assignments x 7 min/60 min) . . . . . 3.50 hours
Cost per hour in dollars $30
Annual cost for observer assignment information
(Alternative 2-- 2.80 hours x $30) $84
(Alternative 1 or 3-- 3.50 hour x $30) $105
Annual time burden per response . . . . . 0.12 hours

F. Weekly deployment/logistics report
Number of deployment/logistics reports per year
(Alternative 2-- 24 deployments x 3 weeks/year) 72
(Alternative 1 or 3-- 30 deployments x 3 weeks/year) 90
Time required for each deployment/logistics report . . . . . 7 min
Annual time requirement for deployment/logistics report
(Alternative 2-- 72 deployment/logistic reports x 7 min/60 min) . . . . . 8.40 hours
(Alternative 1 or 3-- 90 deployment/logistic reports x 7 min/60 min) . . . . . 10.50 hours
Cost per hour in dollars $30
Annual cost for deployment/logistics reports
(Alternative 2-- 8.40 hours x $30/hour) $252
(Alternative 1 or 3-- 10.50 hour x $30/hour) $315
Annual time burden per response (7 min/60 min) . . . . . 0.12 hours

G. Debriefing registration
Number of debriefing registrations per year . . . . . 24 (Alternative 2)
. . . . . 30 (Alternative 1 or 3)
Time required for each debriefing registration . . . . . 7 min
Annual time required for debriefing registration
(Alternative 2-- 24 debriefings x 7 min/60 min) . . . . . 2.8 hours
(Alternative 1 or 3-- 30 debriefings x 7 min/60 min) . . . . . 3.5 hours
Cost per hour in dollars $30

Annual cost for debriefing registration
(Alternative 2-- 2.8 hours x $30/hour) $84
(Alternative 1 or 3-- 3.5 hours x $30/hour) $105
Annual time burden per response (7 min/60 min) . . . . . 0.12 hours

H. Copies of contracts
Number of certified observer providers 4
Time requirement for samples of up to 4 contracts . . . . . 15 min
Annual time requirement for contract information
(4 providers x 4 contracts x 3 min/60 min) . . . . . 0.8 hours
Cost per hour in dollars $30
Annual cost for contract information in dollars
(0.8 hours x $30/hour) $24
Annual time burden per response (15 in/60 min) 0.25

I. Reports of observer Harassment, observer safety, or observer performance concerns
Number of certified observer providers 4
Time requirement for each report . . . . . 2 hours
Annual time requirement for reports
(4 providers x 0.5 reports x 2 hours) . . . . . 4 hours
Cost per hour in dollars $30
Annual cost for each report in dollars
(4 hours x $30/hour) $120
Annual number of reports (4 providers x 2 reports) 0.25

J. Appeals process for suspension and decertification

i. Observer providers
Number of annual estimated observer provider responses
(1 response/5 years) 0.2
Time requirement for each response . . . . . 20 hours

Annual time requirement for response . . . . . 4 hours
Cost per hour in dollars $30
Annual cost for reports in dollars
(4 hours x $30) $120
Time required for each hired legal response . . . . . 20 hours
Annual time requirement for responses
(0.2 responses x 20 hours) . . . . . 4 hours
Cost per hour in dollars $125
Annual cost for responses in dollars $500

ii. Observers
Number of annual estimated observer responses
(24 observers X 0.05 decertification & appeals rate - Alternative 2) 1
(30 observers X 0.05 decertification & appeals rate - Alternatives 1 & 3) 2
Time requirement for each response . . . . . 4 hours
Annual time requirement for response . . . . . .
(24 observers - Alternative 2) . . . . . 4 hours

(30 observers Alternatives 1 & 3) . . . . . 8 hours
Cost per hour in dollars $30
Annual cost for reports in dollars
(4 hour x $30 - Alternative 2) $120
(8 hours x $30 Alternatives 1 & 3) $240

Summary

Time burden
Total annual time burden to observer providers
Alternative 1 . . . . . 40.8 hours
Alternative 2 . . . . . 37.8 hours
Alternative 3 . . . . . 45.0 hours

Total annual time burden per observer provider
Alternative 1 . . . . . 10.2 hours
Alternative 2 . . . . . 9.45 hours
Alternative 3 . . . . . 11.25 hours

Total annual time burden to observers
Alternative 1 . . . . . 0 hours
Alternative 2 . . . . . 4.00 hours
Alternative 3 . . . . . 8.00 hours

Total annual time burden per observer
Alternative 1 . . . . . 0 hours
Alternative 2 . . . . . 0.16 hours
Alternative 3 . . . . . 0.26 hours

Total annual time burden to the public
Alternative 1 . . . . . 10.2 hours
Alternative 2 . . . . . 41.8 hours
Alternative 3 . . . . . 53.0 hours

Cost Burden

Total annual cost burden to observer providers
Alternative 1 . . . . . $1112
Alternative 2 . . . . . $1424
Alternative 3 . . . . . $1618

Total annual cost burden per observer provider
Alternative 1 . . . . . $278
Alternative 2 . . . . . $356
Alternative 3 . . . . . $404

Total annual cost burden to observers
Alternative 1 . . . . . $0
Alternative 2 . . . . . $120

Alternative 3 . . . . . $240

Total annual cost burden per observer
Alternative 1 . . . . . $0
Alternative 2 . . . . . $5
Alternative 3 . . . . . $8

Total annual cost burden to the public
Alternative 1 . . . . . $1112
Alternative 2 . . . . . $1544
Alternative 3 . . . . . $1858

10.0 APPENDIX B- 50 CFR 660 SUBPART G - OBSERVER REGULATIONS

660.306 Prohibitions.

* * * * *

(y) Groundfish observer program. {added at 66 FR 20609, April 24, 2001}

(1) Forcibly assault, resist, oppose, impede, intimidate, harass, sexually harass, bribe, or interfere with an observer.

(2) Interfere with or bias the sampling procedure employed by an observer, including either mechanically or physically sorting or discarding catch before sampling.

(3) Tamper with, destroy, or discard an observer's collected samples, equipment, records, photographic film, papers, or personal effects without the express consent of the observer.

(4) Harass an observer by conduct that:

(i) Has sexual connotations,

(ii) Has the purpose or effect of interfering with the observer's work performance, and/or

(iii) Otherwise creates an intimidating, hostile, or offensive environment. In determining whether conduct constitutes harassment, the totality of the circumstances, including the nature of the conduct and the context in which it occurred, will be considered. The determination of the legality of a particular action will be made from the facts on a case-by-case basis.

(5) Fish for, land, or process fish without observer coverage when a vessel is required to carry an observer under § 660.360(c).

(6) Require, pressure, coerce, or threaten an observer to perform duties normally performed by crew members, including, but not limited to, cooking, washing dishes, standing watch, vessel maintenance, assisting with the setting or retrieval of gear, or any duties associated with the processing of fish, from sorting the catch to the storage of the finished product.

(7) Fail to provide departure or cease fishing reports specified at § 660.360(c)(2).

(8) Fail to meet the vessel responsibilities specified at § 660.360(d).

§ 660.360 Groundfish observer program. {added at 66 FR 20609, April 24, 2001}

(a) General. Vessel owners, operators, and managers are jointly and severally responsible for their vessel's compliance with this section.

(b) Purpose. The purpose of the Groundfish Observer Program is to allow observers to collect fisheries data deemed by the Northwest Regional Administrator, NMFS, to be necessary and appropriate for management, compliance monitoring, and research in the groundfish fisheries and for the conservation of living marine resources and their habitat.

(c) Observer coverage requirements

(1) At-sea processors. [Reserved]

(2) Catcher vessels. For the purposes of this section, catcher vessels include all vessels, using open access or limited entry gear (including exempted gear types) that take and retain, possess or land groundfish at a processor(s) as defined at § 660.302. When NMFS notifies the vessel owner, operator, permit holder, or the vessel manager of any requirement to carry an observer, the vessel may not take and retain, possess, or land any groundfish without carrying an observer.

(i) Notice of departure--Basic rule. At least 24 hours (but not more than 36 hours) before departing on a fishing trip, a vessel that has been notified by NMFS that it is required to carry an observer, or that is operating in an active sampling unit, must notify NMFS (or its designated agent) of the vessel's intended time of departure. Notice will be given in a form to be specified by NMFS.

(A) Optional notice--Weather delays. A vessel that anticipates a delayed departure due to weather or sea conditions may advise NMFS of the anticipated delay when providing the basic notice described in paragraph (c)(2)(i) of this section. If departure is delayed beyond 36 hours from the time the original notice is given, the vessel must provide an additional notice of departure not less than 4 hours prior to departure, in order to enable NMFS to place an observer.

(B) Optional notice--Back-to-back fishing trips. A vessel that intends to make back-to-back fishing trips (i.e., trips with less than 24 hours between offloading from one trip and beginning another), may provide the basic notice described in paragraph (c)(2)(i)) of this section for both trips, prior to making the first trip. A vessel that has given such notice is not required to give additional notice of the second trip.

(ii) Cease fishing report. Not more than 24 hours after ceasing the taking and retaining of groundfish with limited entry or open access gear in order to leave the fishery management area or to fish for species not managed under the Pacific Coast Groundfish Fishery Management Plan, the owner, operator, or vessel manager of each vessel that is required to carry an observer or that is operating in a segment of the fleet that NMFS has identified as an active sampling unit must provide NMFS or its designated agent with notification as specified by NMFS.

(3) Vessels engaged in recreational fishing. [Reserved]

(4) Waiver. The Northwest Regional Administrator may provide written notification to the vessel owner stating that a determination has been made to temporarily waive coverage requirements because of circumstances that are deemed to be beyond the vessel's control.

(d) Vessel responsibilities. An operator of a vessel required to carry one or more observer(s) must provide:

(1) Accommodations and food. Provide accommodations and food that are:

(i) At-sea processors. [Reserved]

(ii) Catcher vessels. Equivalent to those provided to the crew.

(2) Safe conditions. Maintain safe conditions on the vessel for the protection of observer(s) including adherence to all U.S. Coast Guard and other applicable rules, regulations, or statutes pertaining to safe operation of the vessel, and provisions at §§ 600.725 and 600.746 of this chapter.

(3) Observer communications. Facilitate observer communications by:

(i) Observer use of equipment. Allowing observer(s) to use the vessel's communication equipment and personnel, on request, for the entry, transmission, and receipt of work-related messages, at no cost to the observer(s) or the United States or designated agent.

(ii) Communication equipment requirements for at-sea processing vessels. [Reserved]

(4) Vessel position. Allow observer(s) access to, and the use of, the vessel's navigation equipment and personnel, on request, to determine the vessel's position.

(5) Access. Allow observer(s) free and unobstructed access to the vessel's bridge, trawl or working decks, holding bins, processing areas, freezer spaces, weight scales, cargo holds, and any other space that may be used to hold, process, weigh, or store fish or fish products at any time.

(6) Prior notification. Notify observer(s) at least 15 minutes before fish are brought on board, or fish and fish products are transferred from the vessel, to allow sampling the catch or observing the transfer, unless the observer specifically requests not to be notified.

(7) Records. Allow observer(s) to inspect and copy any state or Federal logbook maintained voluntarily or as required by regulation.

(8) Assistance. Provide all other reasonable assistance to enable observer(s) to carry out their duties, including, but not limited to:

(i) Measuring decks, codends, and holding bins.

(ii) Providing the observer(s) with a safe work area.

(iii) Collecting bycatch when requested by the observer(s).

(iv) Collecting and carrying baskets of fish when requested by the observer(s).

(v) Allowing the observer(s) to collect biological data and samples.

(vi) Providing adequate space for storage of biological samples.

(9) At-sea transfers to or from processing vessels. [Reserved]

(e) Procurement of observers services by at-sea processing vessels. [Reserved]

(f) Certification of observers in the at-sea processing vessels. [Reserved]

(g) Certification of observer providers for at-sea processing vessels. [Reserved]

(h) Suspension and decertification process for observers and observer providers in the at-sea processing vessels. [Reserved]

(i) Release of observer data in the at-sea processing vessels. [Reserved]

(j) Sample station and operational requirements–

(1) Observer sampling station. This paragraph contains the requirements for observer sampling stations. The vessel owner must provide an observer sampling station that complies with this section so that the observer can carry out required duties.

(i) Accessibility. The observer sampling station must be available to the observer at all times.

(ii) Location. The observer sampling station must be located within 4 m of the location from which the observer samples unsorted catch. Unobstructed passage must be provided between the observer sampling station and the location where the observer collects sample catch.

(iii) Minimum work space aboard at-sea processing vessels. [Reserved]

(iv) Table aboard at-sea processing vessels. [Reserved]

(v) Scale hanger aboard at-sea processing vessels. [Reserved]

(vi) Diverter board aboard at-sea processing vessels. [Reserved]

(vii) Other requirements for at-sea processing vessels. [Reserved]

(2) Requirements for bins used to make volumetric estimates on at-sea processing vessels. [Reserved]

(3) Operational requirements for at-sea processing vessels. [Reserved]